OPEN SYSTEMS® Accounting Software

Software Development Utilities User's Manual

PN/2810.SD60

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This document has been prepared to conform to the current release version of OPEN SYSTEMS Accounting Software. Because of our extensive development efforts and our desire to further improve and enhance the software, inconsistencies may exist between the software and the documentation in some instances. Call your customer support representative if you encounter an inconsistency.

Open Systems Holding Corp.
1157 Valley Park Drive
Suite 105
Shakopee, Minnesota 55379

General Telephone	(612) 403-5700
General Fax	(612) 496-2495
Support Telephone	(800) 582-5000
Support Fax	(612) 403-5870
Internet Address	www.osas.com

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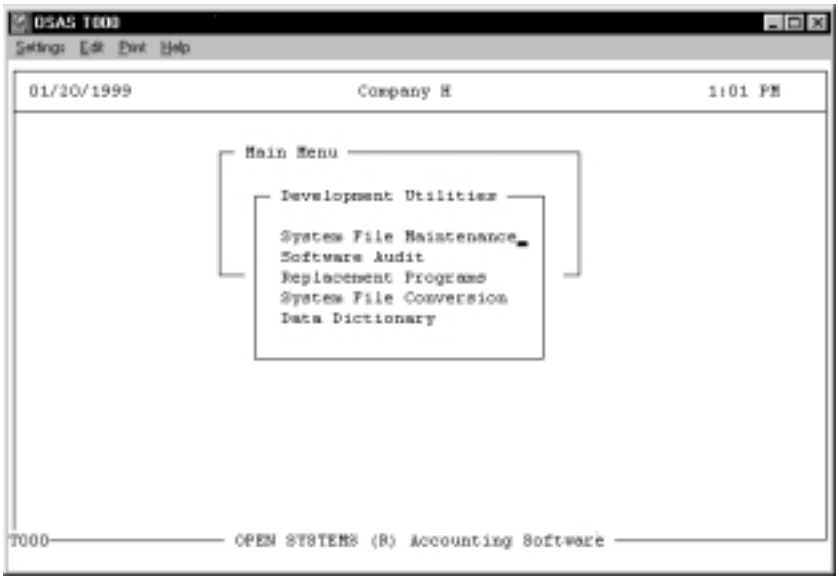
Introduction

The following chapters describe the Software Development Utilities delivered with the Advanced Developer Tool Kit. The utilities are installed through Resource Manager like any other application.

Software Development Utilities, a collection of programs written by Open Systems staff programmers, is used in developing and testing OSAS products. To use these utilities, you must have a complete set of the BBx Supplemental Utilities installed on your development system.

When you choose **Development Utilities** from the Main Menu, this menu appears:



Use the functions on the System File Maintenance menu to update the system files that are required in installable OSAS applications. You can create and maintain information about data files, set option linkages in old OSAS versions, and maintain application version information for conversion programs. You can also print lists from system files and diskette labels.

Use the functions on the Software Audit menu to check BBx programs for violations of OSAS standards and for common programming errors, such as unused line labels and invalid string template names.

Use the functions on the Replacement Programs menu to set up and maintain a database of programs shared between applications. Tracking these programs is important in application development.

Use the functions on the System File Conversion menu to upgrade your application system files from past versions of OSAS to current versions.

Use the functions on the Data Dictionary menu to create and maintain the BASIS Data Dictionary files used in OSAS 5.1x. The process of defining a BASIS Data Dictionary is divided into three parts: file, field, and index definitions.

Note

The OSAS system keeps only certain drives enabled. Some of these utilities enable new drives and may not disable the drive before returning to the menu.

Also included in the utilities are GENLIB.xx files for each version of OSAS from 4.0x to 5.1x and several modified BBx supplemental utilities. GENLIB contains the general routines for use with the BASIS library manager, which is used to update programs with the current general routines discussed in the Software Development Standards manual.

MMRG - A Conversion Assistance Program

The MMRG program is included in the application program directory but cannot be run from the Development Utilities menu. This program is useful for converting version 3.2 programs to the 4.00 level.

MMRG operates on a program loaded into the BBx workspace. The operations are related to conversion of OSAS 3.2 to 4.00.

You can copy MMRG, along with the text files 3800, 7900 and SCROLL, to the directory of the application being converted. Make modifications to MMRG that will make your job easier. Here is a summary of the tasks that MMRG performs:

SETERR/SETESC

SETERR GENERROR is inserted if GENERROR is merged. SETESC 9350; SETERR GENERROR is inserted if GENLOCK is merged.

Copyrights

Enter Y at the copyright prompt to move the author line to line 11. REM 0 - (COPYRIGHT) 15-25 is inserted at line 15.

Output Selection

Enter Y at the output selection prompt to merge file 3800.

Box Routine

Enter Y at the box routine prompt to merge file 7900.

Scroll Routine

Enter Y at the scroll routine prompt to merge file SCROLL.

GL Interface

Enter Y at the GL interface prompt to insert the CALL “GLJRNL.PUB”... statement. MMRG prompts for a line number for the CALL statement.

Using the BASIS Filelist Generator

Several of the Software Audit functions require you to create a filelist before you use them. You can also use a previously defined filelist. The filelist can be saved at any time in the filelist editor.

A filelist is a list of programs or data files upon which you want to perform an operation. The utilities that require a filelist CALL "_flist" upon invocation.

Note

See the *PRO/5 Utilities Manual* for more information about this utility. To exit the filelist editor, use the eXecute option or the Tab key.

Here is a sample of the filelist editor used in the Audit Program Remarks function:

Note

Wildcards follow UNIX operating system wildcard rules. To search all programs in the progAP directory, enter <**../progAP/AP* -p**>. If (AP*.*). is used, only programs with an extension would be selected. The (-p) includes only program files in the search.

Reports

To produce a report, you must specify the amount of information you want in the report.

- To produce a report that includes all the available information, leave the From-Thru fields on the report function screen blank. For example, if you want information about all the vendors to be in a report, leave the Vendor ID From and Thru fields blank.

- To limit the amount of information in the report, enter the range of information in the From-Thru fields. For example, if you want a report to include information only about vendor ACE001, enter ACE001 at both From and Thru. If you want the report to include information about only vendors that start with CO, enter CO at From and COZZZZ at Thru.

Each field where you enter information on a report function screen usually restricts the overall output of the report. For example, if you leave the Vendor ID From and Thru fields blank, the report will contain information about all the vendors. But if you enter invoice 100 in the Invoice Number From and Thru fields, and invoice 100 is assigned only to vendor ACE001, the report includes information only about vendor ACE001.

Output Device

Report function screens offer four output options: printer, file, screen, and end.

- When you need a hard copy of a report, press **P**, and either accept the printer that appears or enter the code for the printer you want to use.

If applicable, press **S** if you want the report to be in standard-size print or **C** if you want it to be in compressed print.

If you want to stop printing after it has begun, press **Ctrl + Break**.

- If you want to save the report as a data file-for example, to include it in a word-processed report (in CR-LF format), press **F**. The data path for the workstation, including the default drive, appears if it is specified in the Defaults function. Enter the filename and file extension, using no more than 35 characters overall.

- To view the report on the screen, press **S**. If the workstation default for compressed characters is inactive, you can select standard mode or compressed mode. See your terminal documentation and the section on the termcap file in the *I/O Reference Guide*.

  If the message End of Page appears at the bottom of the report screen, you can press **Enter** to generate the next page of the report. If the message End of Report appears at the bottom of the report screen, you can press **Enter** to exit to the menu you selected the report from.

- If you need to change some selections before you produce the report, press **E** and then press **Enter**. To end the function and return to the menu without producing the report, select **E** and then use the **Exit** (**F7**) command.

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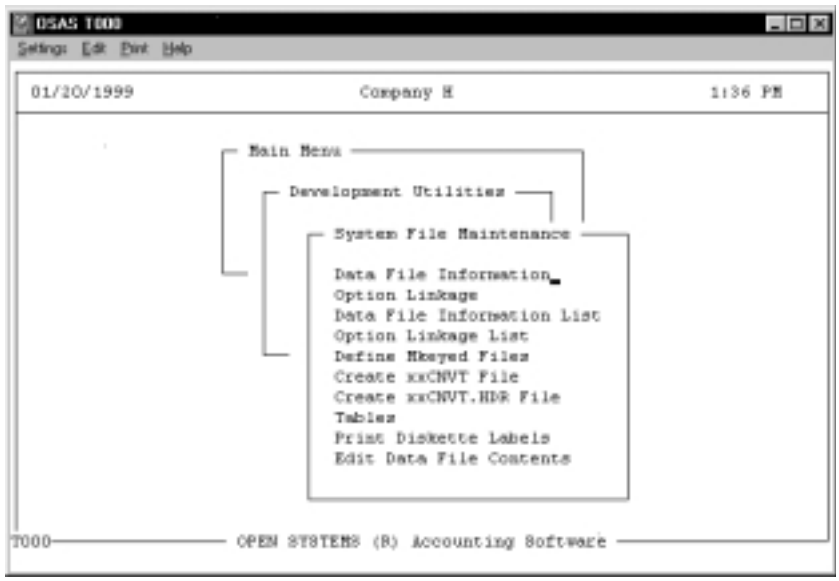
Overview

Use the functions on the System File Maintenance menu to set up and maintain OSAS system files and files required for application installation. You can also print lists of these files, and labels for installable diskettes.

When you select **System File Maintenance** from the Development Utilities menu, this menu appears:



Use the Data File Information function to maintain the xxDATA.yyy file for an application.

Use the Option Linkage function to maintain the xxSWCH file if an application has an option switch (in the OPTxxx record of the xxTB file) that should be updated when a switch in another application is changed, called a link.

To produce a list of data files by version number for a range of applications, print the Data File Information List.

To produce a list of option links for one or more xxSWCH files for a range of applications, print the Option Linkage List.

Use the Define Mkeyed Files function to define/redefine and store single or multikeyed Mkeyed file definitions and to create files based on these definitions.

Use the Create xxCNVT File utility to add a record for each data file in an application along with the version number. This will be merged into the OSCNVT system file during installation.

Use the Tables function to build the system tables.

To enter and store diskette label information and to allow printing of five sets of labels at once, use the Print Diskette Labels function.

To display, edit, delete or add records in a data file, use the Edit Data File Contents function. This function displays each field in a data file and the contents of the field.

Data File Information

Use the Data File Information function to update the xxDATA.yyy file (xx represents the application ID, and yyy represents the version for the application. The xxDATA.yyy file contains data file information for file creation and conversion.

Starting the function

Select **Data File Information** from the System File Maintenance menu. The function screen appears.

Field	Descriptions
Application ID	Enter the ID of the application you want to work with.
Version	Enter the version number of the application to update file information. There is a separate xxDATA.yyy file for each version (yyy) of an application (xx).

Field	Descriptions
File Name	Enter the name of the file you want to work with. If the file is company-specific, enter a lowercase x to indicate the placement of the company ID. When you enter the filename, the system looks for a file with this name in the current company. The file information is then updated and displayed, using the existing file as a template. If no file exists, use the Define Mkeyed Files function to create the file. Then select that file through this function; the key definition information will be updated.
Create Flag	If you want this data file to be created during the Create Data Files function in Resource Manager, enter a number 1-9. If this file should not be created, enter 0. If this file exists, the file type, bytes per record, active keys, and key definitions appear.
Description	Enter a description of the data file. This description will appear in the Data File Information List and in the inquiry windows.
Header	This field cannot be accessed unless the file is an indexed file Enter the name of the header record.

Check your entries. If you find mistakes, move the cursor to the fields you want to change, or use the **Abandon** (**F5**) command to start again from the beginning of the screen.

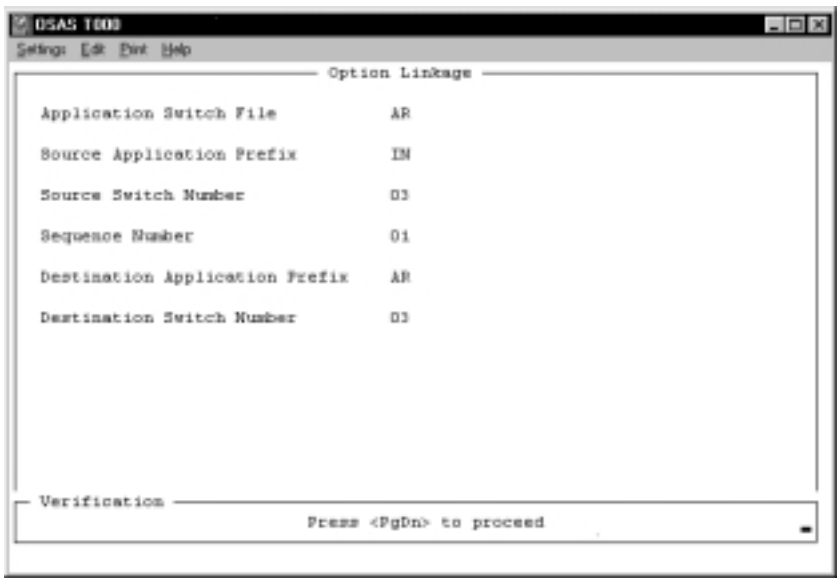
When everything is correct, use the **Proceed** (**PgDn**) command to save the record. Then enter another file or use the **Exit** (**F7**) command to return to the menu.

Option Linkage

The Option Linkage function maintains xxSWCH files. The optional xxSWCH file is necessary if the application has a switch (in the OPTxxx record of the xxTB file) that should be updated when a switch in another application is changed, called a link.

Starting the function

Select **Option Linkage** from the System File Maintenance menu. The function screen appears.



Field	Descriptions
Application Switch File	Enter the application ID of the switch file you want to work with.
Source Application Prefix	Enter the application ID that will control the switch you are entering into the switch file.

Field	Descriptions
Source Switch Number	Enter the source switch number from the source switch file you are creating an entry for.
Sequence Number	Enter the sequence number for the switch.
Destination Application Prefix	Enter the destination application ID that the switch will control.
Destination Switch Number	Enter the switch number for the destination that the switch will control.

Check your entries. If you find mistakes, move the cursor to the fields you want to change, or use the **Abandon** (**F5**) command to start again from the beginning of the screen.

When everything is correct, use the **Proceed** (**PgDn**) command to save the record. Then enter another file or use the **Exit** (**F7**) command to return to the menu.

Data File Information List

The Data File Information List shows the data files that are defined in the xxDATA.yyy files.

Starting the function

Select **Data File Information List** from the System File Maintenance menu. A selection screen appears.

Field	Descriptions
Pick Application From/ Thru	Enter the range of applications you want in the list.
Version Number	Enter the version number of the data files you want to view.

Command bar	Definitions
Output device - (P)rinter (F)ile (S)creen (E)nd	Enter **P** to print the Data File Information List, **F** to file it, **S** to display it on the terminal screen, or **E** to exit to the menu.

Data File Information List report

```
05/30/1999                                                        Page    1
                        Data File Information List
                               Version 6.00

                                Inventory

File Name  Create Type    Key Records  Size   Description                      Header
                       Definitions for multiple keys
 ------------------------------------------------------------------------------
 INAIx         1   Mkeyed     (Dynamic)  128   Inventory Alternate Items        None
                         Key  1:  [4:1:20]+[1:1:20]
                        Key  2:  [1:1:20]+[6:1:1]+[2:1:6]+[4:1:20]
                        Key  3:  [6:1:1]+[2:1:6]+[4:1:20]+[1:1:20]
                       Key  4:  [1:1:20]+[6:1:1]+[2:1:6]+[7:1:7]+[4:1:20]

 INAPPL.TXT    0   String                      IN Application Information       None

 INBNx         1   Mkeyed     (Dynamic)  128   Inventory Item Bins              None
                        Key  1:  [1:1:20]+[2:1:6]+[3:1:6]
                        Key  2:  [2:1:6]+[1:1:20]+[3:1:6]
                        Key  3:  [2:1:6]+[3:1:6]+[1:1:20]

 INCAx         1   Mkeyed     (Dynamic)   64   Inventory Categories             None
                           Key  1:  [1:1:2]
                         Key  2:  [2:1:25]+[1:1:2]

 INCBx         1   Mkeyed     (Dynamic)  384   Physical Count Batches           None
                           Key  1:  [1:1:6]
                        Key  2:  [3:1:4]+[2:1:12]+[1:1:6]

                               End of report
```

Option Linkage List

The Option Linkage List shows the switch information for one or more xxSWCH files.

Starting the function

Select **Option Linkage List** from the System File Maintenance menu. A selection screen appears.

Field	Descriptions
Pick Application ID From/ Thru	Enter the range of application IDs you want in the list.

Command bar	Definitions
Output device - (P)rinter (F)ile (S)creen (E)nd	Enter **P** to print the Option Linkage List, **F** to file it, **S** to display it on the terminal screen, or **E** to exit to the menu.

Option Linkage List report

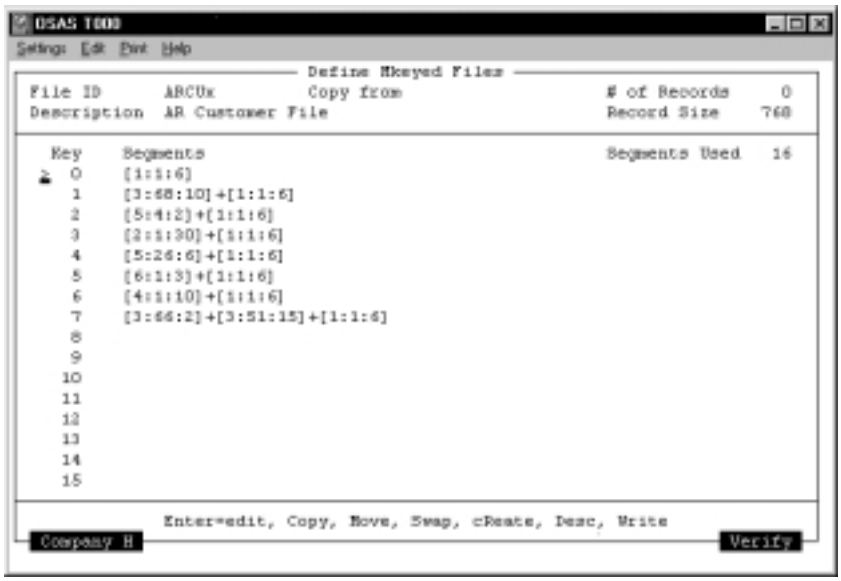
```
12/11/1999                    Builders Supply                    Page    1
                          Option Linkage List

                          Accounts Receivable
                          ===================

              S  O  U  R  C  E                D E S T I N A T I O N
          APPLICATION   SWITCH   SEQUENCE      APPLICATION   SWITCH
            PREFIX      NUMBER    NUMBER         PREFIX      NUMBER

               IN          03        00            AR          03
               IN          03        01            AR          03
               IN          04        00            AR          04
               IN          16        00            AR          25


                         *** End of Report ***
```

Define Mkeyed Files

You can use the Define Mkeyed Files utility to define/redefine and store single or multikeyed Mkeyed file definitions and to create files based on these definitions.

Starting the function

Select **Define Mkeyed Files** from the System File Maintenance menu. The function screen appears.



Field	Descriptions
File ID	Enter the ID of the file you want to create or update.
Description	Enter a description for the file you are working with.
# of Records	If the file is dynamic, leave this field blank. If the file is not dynamic, enter the maximum number of records the file needs.

Field	Descriptions
Record Size	Enter the maximum number of bytes you will need for one record in the file.

Command bar	Definitions
Enter=Edit	Press **Enter** to enter or edit the key definitions for the current key number.
Copy	Press **C** to copy the key definitions for the specified key number to the current key number.
Move	Press **M** to move the contents of the current key definitions to a new key number.
Swap	Press **S** to swap the contents of the current key definitions with another key number.
cReate	Press **R** to create a file in the current company with the specified key definitions.
Desc	Press **D** to move the cursor to the Description field in the header.
Write	Press **W** to write the key definitions to SDFILES.

When you're finished, use the **Exit** (**F7**) command to return to the menu.

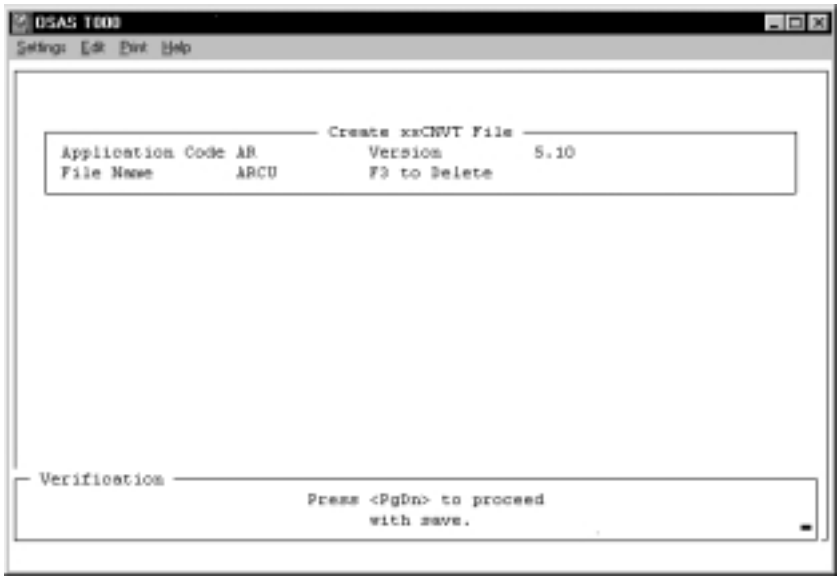
Create xxCNVT File

Use the Create xxCNVT File utility to create an installation file for each application. The file will contain a record for each data file that exists for the specified application code. During installation, the application-specific file is merged into the OSCNVT file.

This file is accessed when a function needs to verify the version number.

Starting the function

Select **Create xxCNVT File** from the System File Maintenance menu. The function screen appears.



Field	Descriptions
Application Code	Enter the ID of the application you want to work with.

Field	Descriptions
Version	Press **Enter** to accept the most recent version that is installed, or enter a different version number. There is a separate xxDATA.yyy file for each version of an application (yyy). Enter the version of the application that you want to update the file information for.
File Name	Enter the name of the file you want to add to the xxDATA.yyy file.

Check your entries. If you find mistakes, move the cursor to the fields you want to change, or use the **Abandon** (**F5**) command to start again from the beginning of the screen.

When everything is correct, use the **Proceed** (**PgDn**) command to save the record. Then enter another file or use the **Exit** (**F7**) command to return to the menu.

Create xxCNVT.HDR file

Use the Create xxCNVT.HDR File utility to create a conversion header file containing all the conversion steps for this application.

Starting the function

Select **Create xxCNVT.HDR File** from the System File Maintenance menu. The function screen appears.

Field	Descriptions
Application ID	Enter the ID of the application you want to work with.
Version	Enter the version number of the application to update file information. There is a separate xxDATA.yyy file for each version (yyy) of an application (xx).

Conversion Steps

Converting your data from older versions of OSAS to 5.20 is a step-by-step process. When converting files from older versions to 5.20, the conversion process moves the data to subdirectories at each step. By entering **Y** or **N** in the “move files” field, the xxCNVT.HRD file directs the conversion process.

By entering **Y** in the “move files” field, the data is placed into the appropriate subdirectory. To not copy the data to the subdirectory, enter **N**. Always enter **Y** in the final directory.

In the example, data is being converted from version 4.00 to 5.20. The program creates the appropriate number of subdirectories, converts the 4.0 data and places it in the 4.1 subdirectory. The 4.1 data is then converted and placed into the 4.5 subdirectory and finally converted and placed into the final destination directory.

Tables

Use the Tables function to maintain these system tables:

- The OUTPUT table store the margins for the File Descriptions.
- The SDEXTyyy table stores the current data dictionary for terminal yyy.

OUTPUT table

When you enter the table ID, the rest of the OUTPUT table appears.

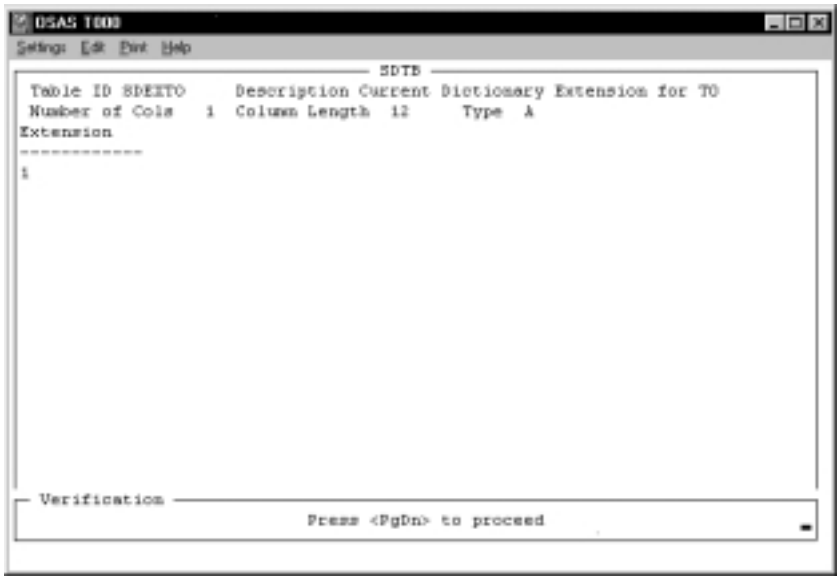
OUTPUT table

Field	Descriptions
Desc	The descriptions in the table are displayed.

Field	Descriptions
Setting	On the first line enter the width for the top margin. On the second line enter the width for the left margin.

The SDEXTyyy table

When you enter the table ID, the rest of the SDEXTyyy table appears.



SDEXTyyy

Field	Descriptions
Extension	The extension of the current data dictionary for terminal Tyyy is displayed.

Print Diskette Labels

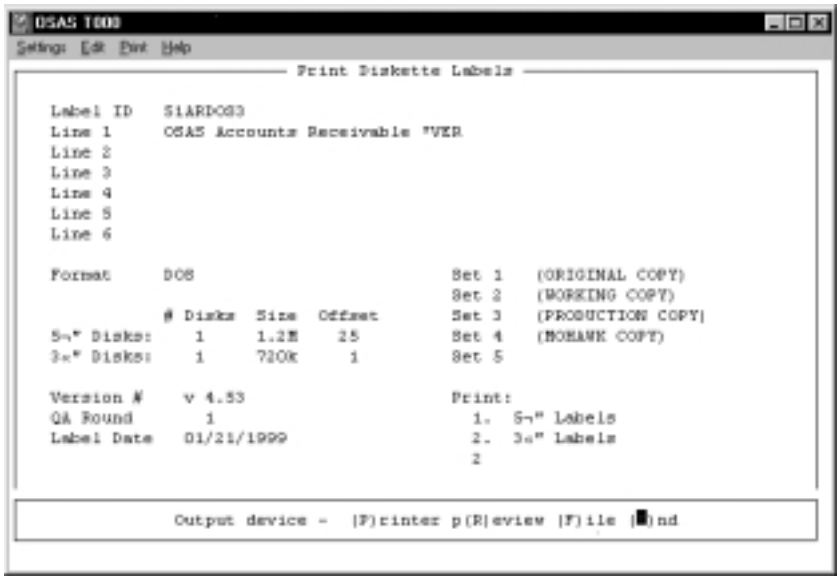
Use the Print Diskette Labels function to enter and store diskette label information.

Note

You might have to change the label program to achieve proper label alignment.

Starting the function

Select **Print Diskette Labels** from the System File Maintenance menu. The function screen appears.



Field	Descriptions
Label ID	Enter the ID of the label that you want to add or modify.

Field	Descriptions
Copy From	If the label ID you entered is not on file, you are prompted for an ID of a label you want to copy.
Line 1- 6	Enter the lines of text you want on the diskette label. You can use the print-time substitutions displayed at the bottom of the screen: *DAT, *FMT, *RND, *SET, and *VER. They are substituted at print time with the entered label date, diskette format, QA (test) round, label set description (e.g., Original Copy, Working Copy), and version.
Format	Enter the diskette format: DOS or TAR.
# Disks	Enter the number of diskettes for each media size for the current application.
Size	Enter the size of the media, such as 1.2M for 5 1/4-inch disks and 1.44M for 3 1/2-inch disks.
Offset	Enter the print offset that determines the position to begin printing on the labels.
Set 1- 5	Enter the description for each label you want to print. Up to five copies of each label will be printed depending on whether you enter a description for each set.
Version #	Enter the version number of the application.
QA Round	Enter the quality assurance round if the media is still in testing.
Label Date	Enter the date the media was created.
Print	Enter **1** to print 5 1/4-inch media labels or **2** to print 3 1/2-inch media labels.

Command bar	Definitions
Output device - (P)rinter (F)ile (S)creen (E)nd	Select **P** to print the diskette labels, **F** to file them, **S** to display them on the terminal screen, or **E** to exit to the menu.

Edit Data File Contents

Use the Edit Data File Contents function to add or change records for files defined as string templates through Data Dictionaries.

Starting the function

Select **Edit Data File Contents** from the System File Maintenance menu. The function screen appears.

Field	Descriptions
File Name	Enter the name of the file whose contents you want to view. The contents of the first record appear, including the value stored in the key number selected and a description and the value for each field in the file.
Key	The value of the key for the current record is displayed.

Field	Descriptions
Key Number	Key number 0 is displayed. To change to a different key number, use the knUm command on the command bar.
Precision	To update precision for numeric fields without a user-defined mask, use the pRecision command on the command bar.

Command bar	Definitions
Enter = edit	Move the prompt (>) to the line you want to edit and press Enter.
Add	Press **A** to add a record to the file.
pRecision	Press **R** to change the precision on numeric fields without a user-defined mask.
Key	Press **K** to select the key of the next record you want to access.
knUm	Press **U** to change the key number you want to search the file on and update the key that is displayed.
Goto	Press **G** to go to a specific field in the file selected.
Delete	Press **D** to delete the current record.
Next	Press **N** to display the next record.
Previous	Press **P** to display the previous record.
Write	Press **W** to write the changes to the current record.

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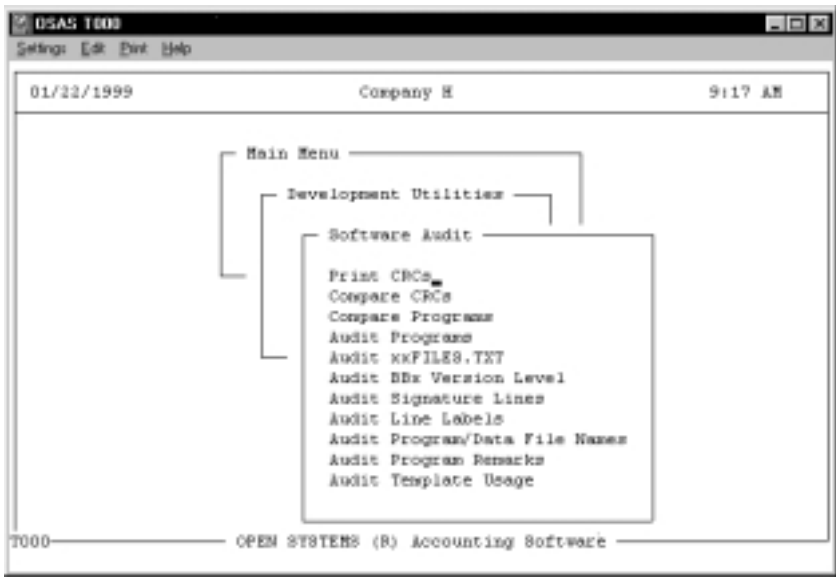
Overview

Use the functions on the Software Audit menu to check programs for violations of OSAS standards and for common programming errors, such as unused line labels and invalid string template names.

When you select **Software Audit** from the Development Utilities menu, this menu appears:



Use the Print CRCs functions to print and calculate CRC (Cyclic Redundancy Check) numbers for all the files in a volume or round. This information should be sent to a file in order to run a compare from one version to another.

Use the Compare CRCs function to print the differences between the CRCs calculated for each volume. To compare CRCs, enter the names of the output files (from the CRC reports) that you want to include in the compare. Only the names of programs with differences are printed in the Compare CRCs report.

Use the Compare Programs utility to compare one or more programs and print the program changes. This utility is a modified version of the "_compare" utility from BASIS International, Ltd.

Use the Audit Programs utility to scan programs for potential programming problems, which include leaving in ESCAPE, SETTRACE, and other debugging verbs. In addition, this audit will look for GOTOs or GOSUBs that go to nonexistent line numbers.

The Audit xxFILES.TXT function performs a cross-reference check of the files in the xxFILES.TXT file and the files on distribution media.

Use the Audit BBx Version Level function to check the last level of BBx that each program in the selected directory/drive was last saved.

The Audit Signature Lines function compares program lines against a text file containing the lines you want to validate. The primary intent of this utility is to verify that signature lines are correct before running a global update.

Use the Audit Line Labels function to produce a report showing unused and missing line labels in programs.

Use the Audit Program/Data File Names function to produce a report showing possible conflicts in program and file naming (for example, the program ARINV0 could conflict with the ARINxxx file for company V0).

Use the Audit Program Remarks function to produce a report showing possible extraneous remarks left in application programs. Specifically, this program looks for REM statements followed by executable code.

Use the Audit Template Usage function to produce a report showing possible invalid string template variables in application programs.

Print CRCs

The Print CRCs function calculates the CRC (Cyclic Redundancy Check) numbers for all the files in a volume. You can use this function to create output files to be used later in the Compare CRCs function.

The Print CRCs report generates a unique hexadecimal checksum for each file. The CRC number is used as a “fingerprint” for version control. Any change in a file—the addition or deletion of a character or substituting a comma for a semicolon—will change the CRC number.

You will generally use the Print CRCs report in conjunction with the Compare CRCs function. By producing the Print CRCs report and storing it in a file, you can do bulk comparisons of media and let the system highlight the differences.

Starting the function

Select **Print CRCs** from the Software Audit menu. The function screen appears.

Field	Descriptions
Application ID	Enter the ID of the application you want to work with and store in the Print CRCs report.
Version #	Enter the version of the application you want to store in the Print CRCs report.

Command bar	Definitions
QA Round	Enter the quality assurance round number of the application.
Disk Size	The default DOS 1.2M is displayed. Press Enter to accept it, or enter a different format and disk size.
Directory Name	Enter the directory or drive name that contains the files to be included in the report.
Output device - (P)rinter (F)ile (E)nd	Enter **P** to print the Print CRCs report, **F** to file it, or **E** to exit to the menu.

Print CRCs report

```
12/08/1999                          Print CRCs                              Page  1
            1:22 PM                    APPL: JO   VER: 5.11   RND: 1
                                                        DOS 1.2M
-------------------------------------------------------------------------------
                  Filename     CRC      Size   Type Directory
-------------------------------------------------------------------------------
              JOAPPL.TXT   C6CE         37 Str  C:/511GR/JO5110RG/
              JOFILES.TXT  24B2        189 Str  C:/511GR/JO5110RG/
              JOLABEL.TXT  9213        133 Str  C:/511GR/JO5110RG/
              JOACC        6294      5,932 Prg  C:/511GR/JO5110RG/
              JOACCFM.PUB  C466      5,939 Prg  C:/511GR/JO5110RG/
              JOACJ        96F8     10,391 Prg  C:/511GR/JO5110RG/
              JOACJ1       9940     22,008 Prg  C:/511GR/JO5110RG/
              JOACJCON     9C4C     15,592 Prg  C:/511GR/JO5110RG/
              JOACJLN1.PUB F74A      8,056 Prg  C:/511GR/JO5110RG/
              JOACJVEW.PUB D69E      3,841 Prg  C:/511GR/JO5110RG/
              JOACT        182D      5,000 Prg  C:/511GR/JO5110RG/
```

Compare CRCs

The Compare CRCs function prints the differences between the CRCs calculated for each volume. Only the names of programs with differences are printed in the Compare CRCs report. If even one version of the same filename is missing or different, all occurrences of the file are printed.

Before running the Compare CRCs function, you must run the Print CRCs report for each volume, sending the output from each volume to a file with a unique filename. Use the BASIS standard filelist entry screen to enter the names of the output files (from the Print CRCs reports) that you want to include in the compare.

Starting the function

Select **Compare CRCs** from the Software Audit menu. The function screen appears.

Field	Descriptions
Application ID	Enter the ID of the application you want to work with.
Version #	Enter the version of the application you are going to compare.
QA Rounds	Enter the quality assurance round for this comparison.
Re-sort?	If you want to re-sort the programs, enter **Y**. If you want to leave the programs in the existing order, enter **N**.

Command bar	Definitions
Output device - (P)rinter (F)ile (E)nd	Enter **P** to print the Compare CRCs report, **F** to file it, or **E** to exit to the menu.

Compare CRCs report

```
12/08/1999                          Compare CRCs                          Page  1
              4:08 PM                          APPL: JO   VER: 5.11
                                                     Rounds: 1
--------------------------------------------------------------------------------
         Filename     CRC      Size   Type Source Directory & CRC file
--------------------------------------------------------------------------------
     Filename               Type Directory  (C:\MSOFFICE\WINWORD\JO51BBS)
JOACC                2 Prg  H:/MAINT/51NEW/51JO/PROGJO/  (C:\MSOFFICE\WINWORD\J
JOACCFM.PUB          9 Prg  H:/MAINT/51NEW/51JO/PROGJO/  (C:\MSOFFICE\WINWORD\J
JOACJ                1 Prg  H:/MAINT/51NEW/51JO/PROGJO/  (C:\MSOFFICE\WINWORD\J
JOACJ1               4 Prg  H:/MAINT/51NEW/51JO/PROGJO/  (C:\MSOFFICE\WINWORD\J
JOACJCON             3 Prg  H:/MAINT/51NEW/51JO/PROGJO/  (C:\MSOFFICE\WINWORD\J
JOACJLN1.PUB         6 Prg  H:/MAINT/51NEW/51JO/PROGJO/  (C:\MSOFFICE\WINWORD\J
JOACJVEW.PUB         1 Prg  H:/MAINT/51NEW/51JO/PROGJO/  (C:\MSOFFICE\WINWORD\J
JOACT                0 Prg  H:/MAINT/51NEW/51JO/PROGJO/  (C:\MSOFFICE\WINWORD\J
JOACTFM.PUB          9 Prg  H:/MAINT/51NEW/51JO/PROGJO/  (C:\MSOFFICE\WINWORD\J
JOADJ                9 Prg  H:/MAINT/51NEW/51JO/PROGJO/  (C:\MSOFFICE\WINWORD\J
JOADJ1               8 Prg  H:/MAINT/51NEW/51JO/PROGJO/  (C:\MSOFFICE\WINWORD\J
JOCJP                2 Prg  H:/MAINT/51NEW/51JO/PROGJO/  (C:\MSOFFICE\WINWORD\J
JOCJT                2 Prg  H:/MAINT/51NEW/51JO/PROGJO/  (C:\MSOFFICE\WINWORD\J
JOCMNT.PUB           1 Prg  H:/MAINT/51NEW/51JO/PROGJO/  (C:\MSOFFICE\WINWORD\J
```

Compare Programs

Use the Compare Programs function to compare the changes between two programs. If you select more than one program for comparison, you will be asked for the directory to search. Only the programs that exist in both directories will be compared.

The file list management utility is used to create the list of programs to be compared.

Starting the function

Select **Compare Programs** from the Software Audit menu. The function screen appears.

When you select eXecute on the filelist entry screen, the following prompt appears:

Field	Descriptions
Program to compare against	Enter the program name to compare the program in the file list against. If you entered more than one program name in your file list, the message **Directory to compare against** would appear. You are then prompted for the output device.

Command bar	Definitions
Output device - (Printer - Terminal - File - End)	Enter **P** to print the Compare Programs report, **T** to display it on the terminal screen, **F** to file it, or **E** to exit to the menu.

Compare Programs report

```
      Compare: C:/511GR/JO511ORG/JOADJ        to: C:/511GR/PROGJO/JOADJ
 Date: December 11, 1999                                        Time: 05:16 PM
--------------------------------------------------------------------------------
    change   0010 REM 0 - "JOADJ  - 09/05/95 - JOB/PHASE ADJUSTMENTS     "
       to    0010 REM 0 - "JOADJ  - 11/27/95 - JOB/PHASE ADJUSTMENTS     "

                       add      0012 REM PTS: 8314|

    add      2235 IF ADJ$="P" THEN LET ADJQ=PTDQTY FI; IF ADJ$="Y" THEN LE
                  T ADJQ=YTDQTY FI; IF ADJ$="J" THEN LET ADJQ=JTDQTY|
```

Audit Programs

The Audit Programs function scans programs for potential programming problems, which include leaving in ESCAPE, SETTRACE, and other debugging verbs. In addition, this audit will look for GOTOs or GOSUBs that go to nonexistent line numbers.

After you select the output device, use the filelist entry screen (see page 1-7) to enter the list of files you want to audit. A report that shows the violations is then printed. Analyze the list, determine which items are problems, and repair the programs. See the list below for code violations.

Do not use these verbs. Some of them are used by special programs in the SD Utilities and the Resource Manager, but they are limited to system structure setup and program maintenance functions. Normal accounting processing does not need any of them.

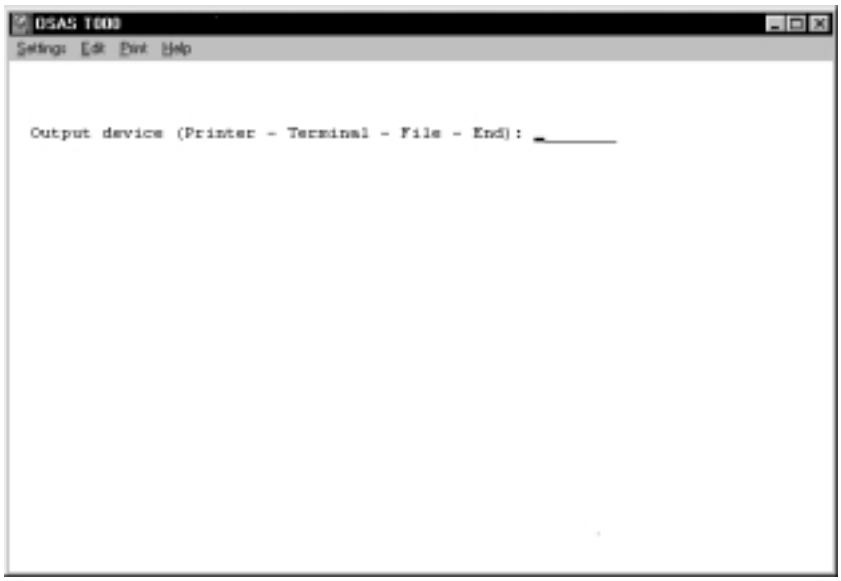
BEGIN	DISABLE	EXECUTE	RESET	SETOPTS	BYE
DUMP	MERGE	RMDIR	SETTIME	CHDIR	ENABLE
PREFIX	SAVE	SETTRACE	CLEAR	ESCAPE	RELEASE
SETDAY	START	COPY	ESCOFF	SETERR	
STOP	DELETE	ESCON	RENUM	SETESC	

All programs must have an error trapping section. If the program allows user input, it should have the GENERROR routine. If the program has no user input, it should have the GENLOCK routine.

Failure to follow these standards may mean that the application does not work in multiuser operation.

Starting the function

Select **Audit Programs** from the Software Audit menu. The following prompt appears.



Command bar	Definitions
Output device - (Printer - Terminal - File - End)	Enter **P** to print the Audit Programs report, **T** to display it on the terminal screen, **F** to file it, or **E** to exit to the menu.

After you select the output device, the filelist screen appears. When you select eXecute on the filelist entry screen, the output is generated.

Audit Programs report

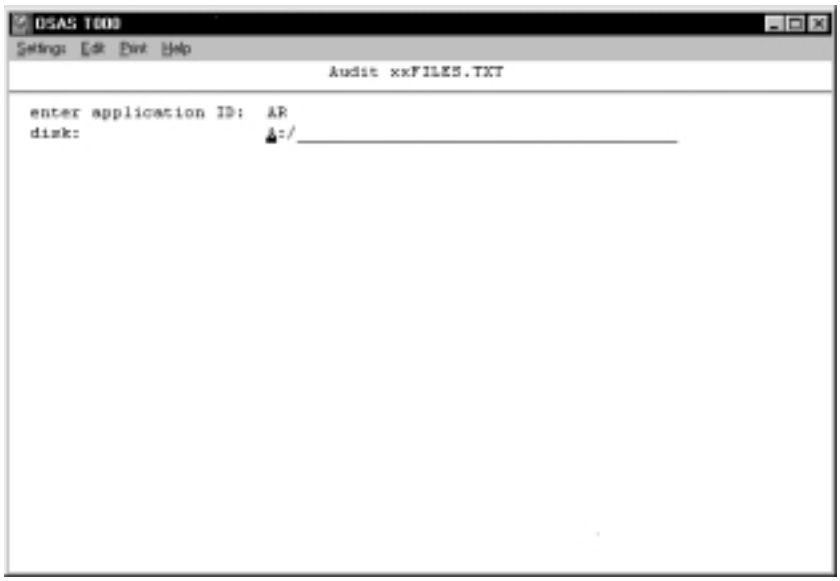
```
2210 READ (FILE[16],KNUM=3,KEY=CC0$+FILL(14),DOM=NEXT_CODE,ERR=GENERROR)

6100 CALL “GENINPUT.PUB”,ERR=GENERROR,Z9$,Y$,(X0),(X1),(X2),(X3X,X$,INFO,
     WINDID$,SELVAL$,COMPID$,PROGID$,FILE[ALL],YDISABLE$,PGM(-2),FLD_HLP$

8305 LET GENOPEN_MSG$=””,YSAVE$=YDISABLE$,YDISABLE$=”XSJPUD”,Y$=””

8320 LET YDISABLE$=YSAVE$,YSAVE$=””; RETURN

8410 CALL “GENERROR.PUB”,X9$,X8$,ERR,TCB(5),O7,Y$,TCB(10),X1$(1

8452 LET SPREC=TCB (14) ; RESET; PRECISION SPREC; SETERR GENERROR

///PROGJO/JOACC done.  8 anomalies

==================
```

Audit xxFiles.TXT

The Audit xxFILES.TXT function performs a cross-reference check of the files in the xxFILES.TXT file and on distribution media.

Starting the function

Select **Audit xxFILES.TXT** from the Software Audit menu. The following prompts appear:



Field	Descriptions
enter application ID	Enter the ID of the application you want to work with.
disk	Enter the disk or drive that contains the media you want to verify.

Command bar	Definitions
Output device - (Printer - Terminal - File - End)	Enter **P** to print the Audit xxFILES.TXT report, **T** to display it on the terminal screen, **F** to file it, or **E** to exit to the menu.

Audit BBx Version Level

Use the Audit BBx Version Level function to check the last level of BBx that each program in the selected directory/drive was last saved.

Starting the function

Select **Audit BBx Version Level** from the Software Audit menu. This function screen appears.

Field	Descriptions
Application ID	Enter the ID of the application you want to work with.
Version #	Enter the version number of the application you want to work with.
QA Round	Enter the quality assurance round number of the application.

Field	Descriptions
Disk Size	The default DOS 1.2M is displayed. Press **Enter** to accept it, or enter a different format and disk size.
Directory Name	Enter the directory or drive name that contains the files to be included in the report.

Command bar	Definitions
Output device - (P)rinter (F)ile (E)nd	Enter **P** to print the Audit BBx Version Level report, **F** to file it, or **E** to exit to the menu.

Audit BBx Version Level report

```
12/08/1999                Audit BBx Version Level                    Page  1
            11:44 AM                APPL: JO   VER: 5.11   RND: 1
                                                    DOS 1.2M
--------------------------------------------------------------------------------
                 Filename     Level    Size   Type Directory
--------------------------------------------------------------------------------
               JOPUC        04        6,598 Prg  C:/511GR/PROGJO/
               JOPUC1       04       14,789 Prg  C:/511GR/PROGJO/
               JOACC        04        5,932 Prg  C:/511GR/PROGJO/
               JOACCFM.PUB  04        5,939 Prg  C:/511GR/PROGJO/
               JOACJ        04       10,391 Prg  C:/511GR/PROGJO/
               JOACJ1       04       22,204 Prg  C:/511GR/PROGJO/
               JOACJCON     04       15,593 Prg  C:/511GR/PROGJO/
               JOACJLN1.PUB 04        8,056 Prg  C:/511GR/PROGJO/
               JOACJVEW.PUB 04        3,841 Prg  C:/511GR/PROGJO/
               JOACT        04        5,000 Prg  C:/511GR/PROGJO/
               JOACTFM.PUB  04        4,449 Prg  C:/511GR/PROGJO/
               JOADJ        04       20,979 Prg  C:/511GR/PROGJO/
               JOPRJC       04        5,401 Prg  C:/511GR/PROGJO/
               JOPRJC1      04        4,118 Prg  C:/511GR/PROGJO/
               JOPRVC       04        7,749 Prg  C:/511GR/PROGJO/
               JOPRVC1      04        6,406 Prg  C:/511GR/PROGJO/
               JOPSM        04        6,854 Prg  C:/511GR/PROGJO/
               JOPSM1       04        6,343 Prg  C:/511GR/PROGJO/

                          * * End of Report **
```

Audit Signature Lines

The Audit Signature Lines function compares program lines against a text file containing the lines you want to validate. The primary intent of this utility is to verify that signature lines are correct before running a global update.

Note

Default text files (GENSIG45.TXT and GENSIG51.TXT) containing 4.5x and 5.1x signature lines are provided with the utilities. The filelist management utility (see chapter 1, section 2) is used to create the list of files that are checked against the default text files.

Starting the function

Select **Audit Signature Lines** from the Software Audit menu. The function screen appears:

When you select eXecute on the filelist entry screen, the following prompts appear:

Field	Descriptions
Output device - (Printer - Terminal - File - End)	Select **P** to print the Audit Signature Lines report, **T** to display it on the terminal screen, **F** to file it, or **E** to exit to the menu.
Display discrepancies only	Enter **Y** to display only the signature lines that contain discrepancies, or enter **N** to display all discrepancies.
Compare File	Enter the compare file that will be used to check the current file list. Enter GENSIG51.TXT for version 5.1x, or enter GENSIG45.TXT for version 4.5x. After you press **Enter**, the function is executed.

Audit Signature Lines report

```
                              C:../PROGJO/JOCMNT.PUB
------------------------------------------------------------------------------
                     6000 REM 0 - (Modified GENINPUT) 6000-6190
                             9300 LET Y$="S"; GOTO 8452
```

Audit Line Labels

The Audit Line Labels function produces a report showing unused and missing line labels in programs.

Use the filelist entry screen (see page 1-7) to enter the list of programs that you want to audit.

Starting the function

Select **Audit Line Labels** from the Software Audit menu. This function screen appears.

When you select eXecute on the filelist entry screen, the following prompts appear:

Field	Descriptions
Output device - (Printer - Terminal - File - End)	Select **P** to print the Audit Line Labels report, **T** to display it on the terminal screen, **F** to file it, or **E** to exit to the menu.
Include IOLists	Enter **Y** to include IOLists with the list of references, or enter **N** to exclude IOLists from the report. Each program in an application typically lists all the files for that application even though a file may not be used in the current program. To reduce the amount of detail in the report, you may want to exclude IOLists. After you press **Enter**, the function begins to execute.

Audit Line Labels report

```
                    Cross reference of ..\progjo\joacc            Page : 1
--------------------------------------------------------------------------------

                           ***** Line references

        GOT_CODE .........................*** No References Found ***
        JOBSXXX .........................*** No References Found ***
        JODEXXX .........................*** No References Found ***
        JOHIXXX .........................*** No References Found ***
        JOJCXXX .........................*** No References Found ***
        QUIT ............................*** No References Found ***
        XXTB ............................*** No References Found ***
```

Audit Program/Data File Names

Use the Audit Program/Data File Names function to produce a report showing possible conflicts in program and file naming (for example, program ARINV0 could conflict with the ARINxxx file for company V0).

Starting the function

Select **Audit Program/Data File Names** from the Software Audit menu. The function screen appears.

Field	Descriptions
Application	Enter the ID of the application you want to work with.
Application Path	The directory path of the application is displayed from OSAPPL, the application information file. Press **Enter** to accept the default, or enter a different directory path.

Field	Descriptions
Version Number	The version number of the application that is displayed is based on the OSAPPL and xxDATA.yyy files.
Search RM Path?	Enter **Y** to search for additional application programs in the Resource Manager directory path, or enter **N** to select only the application directory. If you select N, you are prompted for the output device.
RM Path	If you entered Y to search the RM path, you are prompted for the path. The directory path of Resource Manager is displayed from OSAPPL, the application information file. Press **Enter** to accept the default, or enter a different directory path.

Command bar	Definitions
Output device - (P)rinter (F)ile (S)creen (E)nd	Enter **P** to print the Audit Program/Data File Names report, **F** to file it, **S** to display it on the terminal screen, or **E** to exit to the menu.

Audit Programs/Data File Names report

```
06/13/1999              Audit Program/Data File Names              Page    1
             1:13 PM                      JO - Job Cost Rnd 16
                      File Prefix         Program Name
                    ---------------------------------------
                     JOCD                c:/p4/progJO/JOCDR
                     JOCD                c:/p4/progJO/JOCDR1
                     JODE                c:/p4/progJO/JODEL
                     JODE                c:/p4/progJO/JODELC


                                End of Report
```

Audit Program Remarks

Use the Audit Program Remarks function to produce a report showing possible extraneous remarks left in application programs. Specifically, this program looks for REM statements followed by executable code.

Use the filelist entry screen to enter the list of programs you want to audit.

Starting the function

Select **Audit Program Remarks** from the Software Audit menu. The function screen appears.

When you select eXecute on the filelist entry screen, the following prompt appears:

Field	Descriptions
Output device - (Printer - Terminal - File - End)	Enter **P** to print the Audit Program Remarks report, **T** to display it on the terminal screen, **F** to file it, or **E** to exit to the menu.

Audit Program Remarks report

```
          Cross reference of C:/P4/PROGIN/INACI           Page : 1
------------------------------------------------------------------------------

                          ***** Line references

                 102 0102 REM IF FILES_OPEN THEN GOTO 0500


                              End of Report
```

Audit Template Usage

Use the Audit Template Usage function to produce a report showing possible invalid string template variables in application programs. The program looks for string template references and verifies them against the OSTPL files.

Use the filelist entry screen to enter the list of programs you want to audit.

Starting the function

Select **Audit Template Usage** from the Software Audit menu. The function screen appears.

When you select eXecute on the filelist entry screen, the following prompt appears:

Field	Descriptions
Output device - (Printer - Terminal - File - End)	Enter **P** to print the Audit Template Usage report, **T** to display it on the terminal screen, **F** to file it, or **E** to exit to the menu.

Audit Template Usage report

```
          Cross reference of C:/P4/PROGIN/INACI           Page : 1
--------------------------------------------------------------------------------

                     ***** Missing Template Field Names

                             INQT.IUQ1     4550
                             INVE.DESCR    1570

                        ***** Missing Template Names

          INGET     420,   510,   520,  1240,  1250,  1290,  1370,
                               INGET    1380


                                End of Report
```

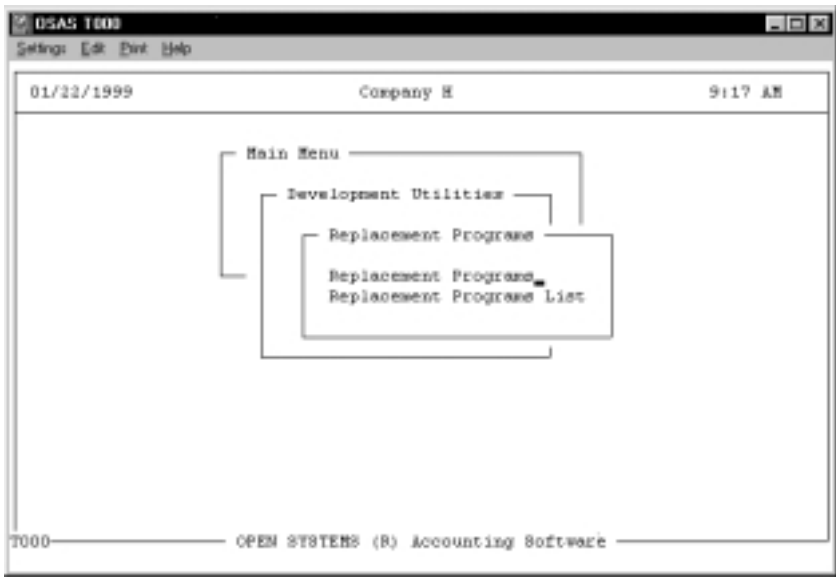
Replacement Programs 4

Overview	4-3
Replacement Programs	4-5
Replacement Programs List	4-7

Overview

Use the functions on the Replacement Programs menu to set up and maintain a database of programs shared among applications. For example, in standard OSAS Accounts Receivable the program ARAGE is overwritten by another version of ARAGE when Time Billing is installed. Tracking these programs is important in application development.

When you select **Replacement Programs** from the Development Utilities menu, this menu appears:



Use the Replacement Programs function to enter the base programs that are modified by a vertical application or a custom modification. This information is stored in the SDPRMOD.DAT file.

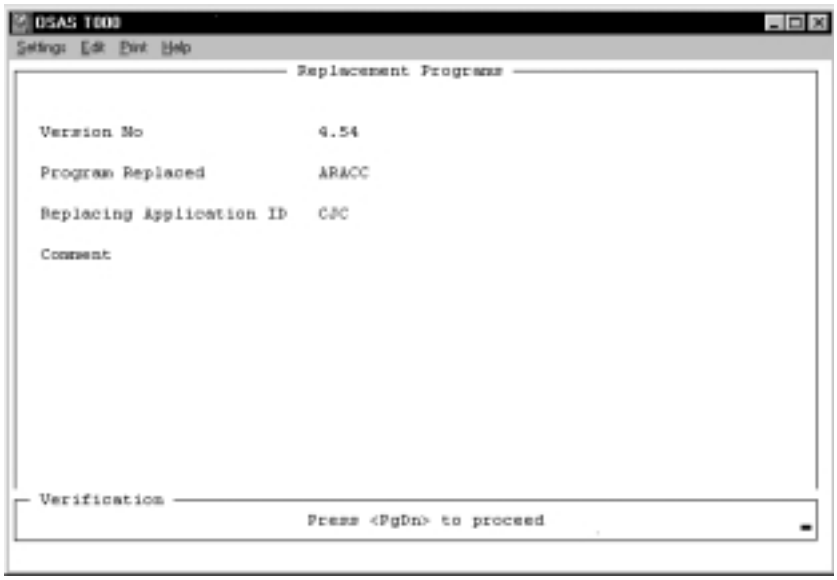
The Replacement Programs List shows information stored in the SDPRMOD.DAT file on modifying applications and replaced programs.

Replacement Programs

Use the Replacement Programs function to enter the base programs that are modified by a vertical application or a custom modification. This information is stored in the SDPRMOD.DAT file. This file contains all the programs replaced by Open Systems applications.

Starting the function

Select **Replacement Programs** from the Replacement Programs menu. The function screen appears.



Field	Descriptions
Version No	Enter the version number of the application.
Program Replaced	Enter the base program replaced by the replacing application.

Field	Descriptions
Replacing Application ID	Enter the ID of the application that has replaced a based program.
Comment	Enter a comment for the replacement.

Check your entries. If you find mistakes, move the cursor to the fields you want to change, or use the **Abandon** (**F5**) command to start again from the beginning of the screen.

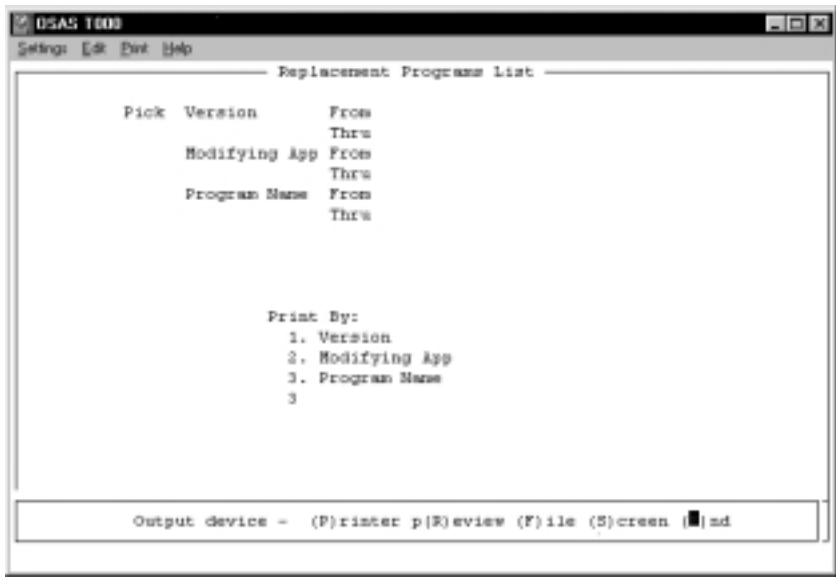
When everything is correct, use the **Proceed** (**PgDn**) command to save the record. Then enter another replacement program or use the **Exit** (**F7**) command to return to the menu.

Replacement Programs List

The Replacement Programs List shows information stored in the SDPRMOD.DAT file on modifying applications and replaced programs.

Starting the function

Select **Replacement Programs List** from the Replacement Programs menu. A selection screen appears.



Field	Descriptions
Pick Version From/Thru	Enter the range of version numbers whose information you want in the report.
Pick Modifying App From/Thru	Enter the range of modifying applications whose information you want in the report.
Pick Program Name From/Thru	Enter the range of program names whose information you want in the report.

Field	Descriptions
Print By	Select the item by which you want to organize the report.

Command bar	Definitions
Output device - (P)rinter (F)ile (S)creen (E)nd	Press **P** to print the Replacement Programs List, **F** to file it, **S** to display it on the terminal screen, or **E** to exit to the menu.

Replacement Programs List report

```
12/08/1999                                                        Page    1
              4:22 PM            Replacement Programs List

                   Program        App.  Ver.   Comment
     ------------------------------------------------------------

                         ARACC           QS    4.53
                         ARACC1          QS    4.53
                         ARACC2          QS    4.53
                         ARACC3          QS    4.53
                         ARACCFM.PUB     QS    4.53
                         ARACPC          QS    4.53
                         ARACPCFM.PUB    QS    4.53
                         ARDATA.MRG      QS    4.53
                         ARHELP.MRG      QS    4.53
                         ARPNC           QS    4.53
                         ARPNC1          QS    4.53
                         ARPPT           QS    4.53
                         ARPPT1          QS    4.53

                               End of Report
```

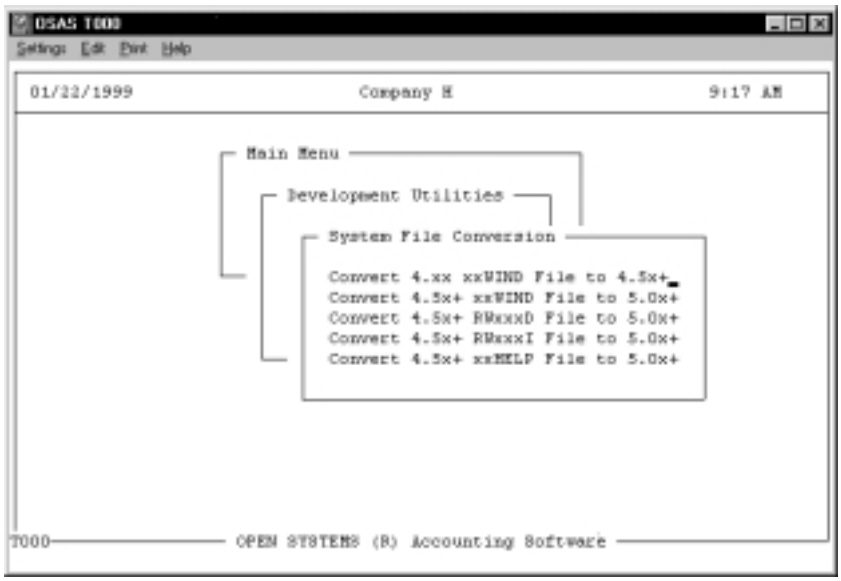
System File Conversion 5

Overview	5-3
Convert 4.xx xxWIND File to 4.5x+	5-5
Convert 4.5x+ xxWIND File to 5.0x+	5-7
Convert 4.5x+ RWxxxD File to 5.0x+	5-9
Convert 4.5x+ RWxxxI File to 5.0x+	5-11
Convert 4.5x+ xxHELP File to 5.0x+	5-13

Overview

Use the functions on the System File Conversion menu to upgrade your application system files from a past version of OPEN SYSTEMS Accounting Software to a more recent version. These functions are unchanged from version 5.0.

When you select **System File Conversion** from the Development Utilities menu, this menu appears:



Use the Convert 4.xx xxWIND File to 4.5x+ function to convert 4.0x and 4.1x window definitions to a 4.5x+ format.

Use the Convert 4.5x+ xxWIND File to 5.0x+ function to convert 4.5x and 4.6x window definitions to a 5.0x+ format.

Use the Convert 4.5x+ RWxxxD File to 5.0x+ function to convert 4.5x and 4.6x RWxxxD files to a 5.0x+ format. The RWxxxD files are the Data Dictionary files that contain the data names for an application. They include the field names for that application, cross-references to interfaced applications, and user-defined data names.

Use the Convert 4.5x+ RWxxxI File to 5.0x+ function to convert 4.5x and 4.6x RWxxxI files to a 5.0x+ format. The RWxxxI files are the Permanent Report Instruction files that contain the report instructions you created and saved for each topic.

Use the Convert 4.5x+ xxHELP File to 5.0x+ function to convert help files from 4.5x and 4.6x to 5.0x+. Each application contains a help file. The information is stored in the xxHELP file (xx is the application ID).

Convert 4.xx xxWIND File to 4.5x+

This utility converts 4.0x and 4.1x window definition files to the 4.5x format.

Starting the function

Select **Convert 4.xx xxWIND File to 4.5x+** from the System File Conversion menu. The function screen appears.

Field	Descriptions
Application	Enter the ID of the application you want to convert.

If the window file is already at the 4.5x level, a message appears to tell you that the file does not need to be converted.

Check your entry. If you want to change it, move the cursor to the field, or use the **Abandon** (**F5**) command.

When your entry is correct, use the **Proceed** (**PgDn**) command to save the record. Then convert another application or use the **Exit** (**F7**) command to return to the menu.

Convert 4.5x+ xxWIND File to 5.0x+

This utility converts 4.5x and 4.6x window definition files to the 5.1x format.

Starting the function

Select **Convert 4.5x+ xxWIND File to 5.0x+** from the System File Conversion menu. The function screen appears.

Field	Descriptions
Application ID	Enter the ID of the application you want to convert.

If the window file is already at the 5.0x level, a message appears to tell you that the file does not need to be converted.

Check your entry. If you want to change it, move the cursor to the field, or use the **Abandon** (**F5**) command.

When your entry is correct, use the **Proceed** (**PgDn**) command to save the record. Then enter another application ID or use the **Exit** (**F7**) command to return to the menu.

Convert 4.5x+ RWxxxD File to 5.0x+

This utility converts 4.5x and 4.6x RWxxxD files to the 5.0x format. The RWxxxD files are the Data Dictionary files that contain the data names for an application. They include the field names for that application, cross-references to interfaced applications, and user-defined data names.

Starting the function

Select **Convert 4.5x+ RWxxxD File to 5.0x+** from the System File Conversion menu. The function screen appears.

Enter the name of the directory that contains the files you want to convert. You cannot convert files in the directory you are converting to.

Check your entry. If you want to change it, move the cursor to the field, or use the **Abandon** (**F5**) command.

When your entry is correct, use the **Proceed** (**PgDn**) command to save the record. Then enter another path or use the **Exit** (**F7**) command to return to the menu.

Convert 4.5x+ RWxxxI File to 5.0x+

This utility converts 4.5x and 4.6x RWxxxI files to the 5.0x format. The RWxxxI files are the Permanent Report Instruction files that contain the report instructions you created and saved for each topic.

Starting the function

Select **Convert 4.5x+ RWxxxI File to 5.0x+** from the System File Conversion menu. The function screen appears.

Enter the name of the directory that contains the files you want to convert. You cannot convert files in the directory you are converting to.

Check your entry. If you want to change it, move the cursor to the field, or use the **Abandon** (**F5**) command.

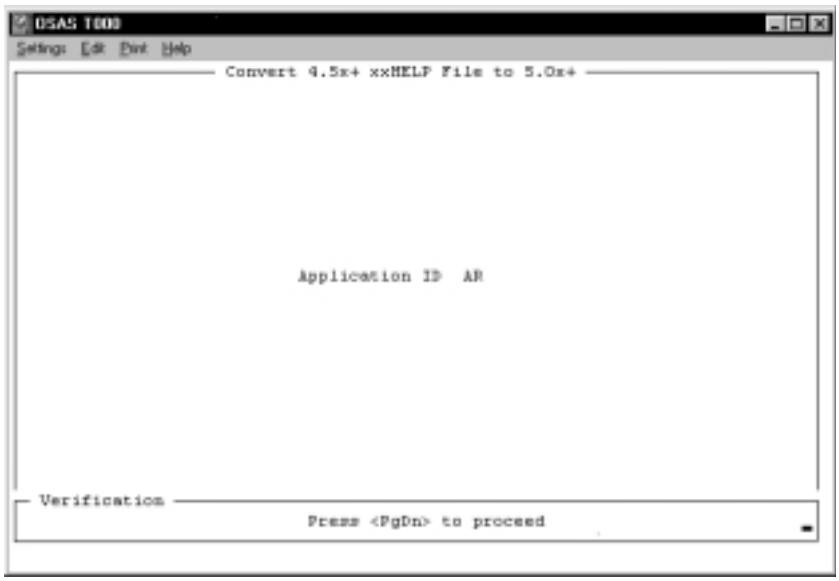
When your entry is correct, use the **Proceed** (**PgDn**) command to save the record. Then enter another path or use the **Exit** (**F7**) command to return to the menu.

Convert 4.5x+ xxHELP File to 5.0x+

This utility converts help files from 4.5x and 4.6x to 5.0x. Each application contains a help file. The information is stored in the xxHELP file (xx is the application ID).

Starting the function

Select **Convert 4.5x+ xxHELP File to 5.0x+** from the System File Conversion menu. The function screen appears.



Field	Descriptions
Application ID	Enter the ID of the application you want to convert.

Check your entry. If you want to change it, move the cursor to the field, or use the **Abandon** (**F5**) command.

When your entry is correct, use the **Proceed** (**PgDn**) command to save the record. Then enter another application ID, or use the **Exit** (**F7**) command to return to the menu.

Data Dictionary 6

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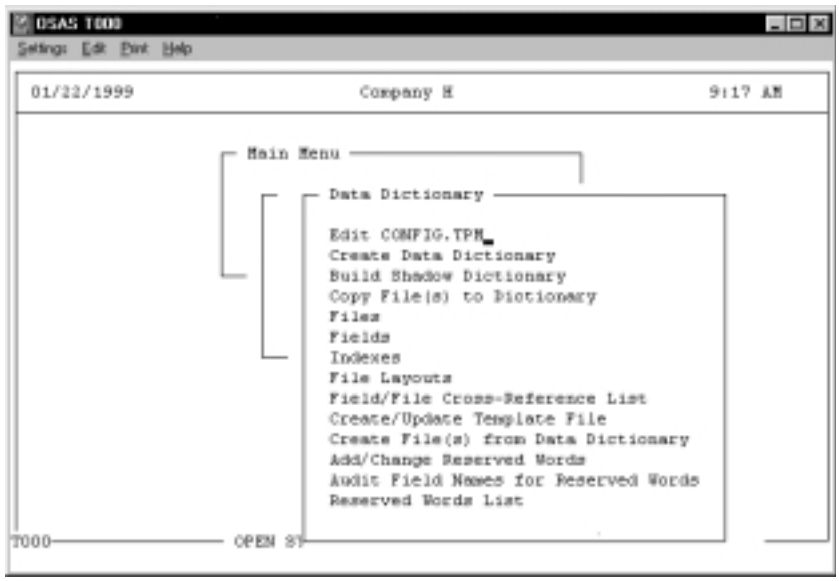
Overview

Use the functions on the Data Dictionary menu to create and maintain the BASIS Data Dictionary files used in OSAS version 5.1x and above. The process of defining a BASIS Data Dictionary is divided into three parts: file, field, and index definitions for each file used by OSAS.

When you select **Data Dictionary** from the Development Utilities menu, this menu appears:



Use the Create Data Dictionary function to create a set of data dictionary files from the template *.OSI files.

Use the Build Shadow Dictionary function to create a Shadow Dictionary to aid in data manipulation. Use this function only if you use a revision 1.x ODBC driver.

Use the Copy File(s) to Dictionary function to copy file, index and field definitions from one BASIS Data Dictionary to another.

Use the Files function to set up and maintain information about the data files used in OSAS programs.

Use the Fields function to define the fields in the OSAS data files. This information is used to create string templates and build data dictionary files for the ODBC Kit application.

Use the Indexes function to define the keys used in OSAS Mkeyed data files.

Use the File Layouts function to produce a hard copy of the files in the BASIS Data Dictionary.

Use the Field/File Cross-Reference List function to produce a printout of all the data dictionary items by field name. Use the list to verify the consistency of field names in related files.

Use the Create/Update Template File function to create or update the string template files OSTPL or xxTPL (xx represents the application ID).

Use the Create File(s) from Data Dictionary function to create a data file or all data files for an application based on the criteria in the BASIS Data Dictionary.

Use the Add/Change Reserved Words function to add or update the file of reserved SQL words. This file is verified when you add a field name to a file.

Use the Audit Field Names for Reserved Words function to validate an application for reserved words or to check all applications.

Use Reserved Words List to print all the words that are reserved SQL words.

Edit CONFIG.TPM

Use this function to create or edit your dictionary configuration file.

Starting the function

Select **Edit CONFIG.TPM** from the Data Dictionary menu. The function screen appears.

Field Name	Description
Path and Name of CONFIG.TPM File	Enter the file path and name of the database configuration file you want to work with. Enter a \ at the end of the directory path. If you enter a new path or database configuration file name, a skeleton file is built.
DICTIONARY	Enter the file path to the data dictionary files. Enter a / at the end of the directory path.

Field Name	Description
DATA	Enter the file path to the company data. Enter a / at the end of the directory path.
SYSFIL	Enter the file path to the OSAS system files. Enter a / at the end of the directory path.
CID	Enter the company ID for the database configuration file.

Command	Description
Enter = edit	Move the prompt (>) to the line to edit and press **Enter**.
Append Line	Press **A** to add a line.
Write	Press **W** to save your changes.
Change CONFIG.TPM Names	Press **C** to save your changes to a new configuration file.

When you finish your entries, use the **Exit** (**F7**) command to return to the menu.

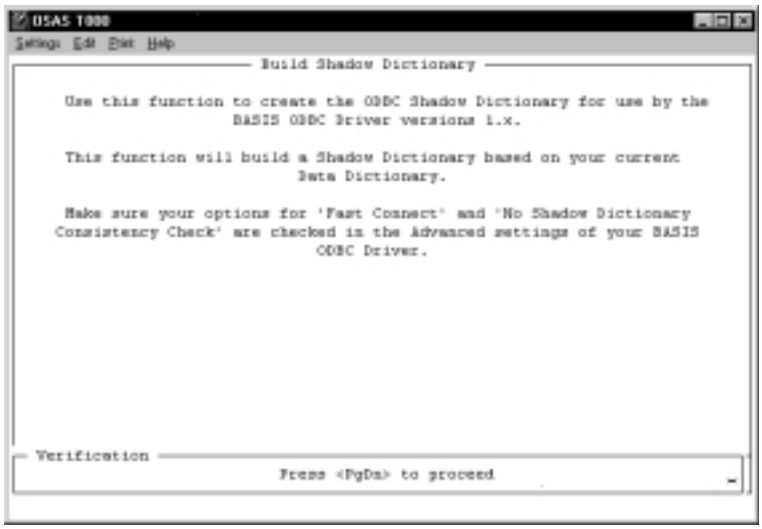
Build Shadow Dictionary

Note

Versions of the OSAS ODBC Kit before 6.05 used a revision 1.x ODBC driver, which made use of a shadow dictionary. Beginning with the ODBC Kit version 6.05, OSAS uses a revision 2.x driver which does not use the shadow dictionary. Use this function only if you use the revision 1.x ODBC driver.

Starting the function

The Build Shadow Dictionary screen appears.


OSAS 1000
Settings Edit Disk Help
Build Shadow Dictionary
Use this function to create the ODBC Shadow Dictionary for use by the BASIS ODBC Driver versions 1.x.
This function will build a Shadow Dictionary based on your current Data Dictionary.
Make sure your options for 'Fast Connect' and 'No Shadow Dictionary Consistency Check' are checked in the Advanced settings of your BASIS ODBC Driver.
Verification
Press <PgDn> to proceed

Before you create your dictionary, check the **Fast Connect** and **No Shadow Dictionary Consistency Check** in the Advanced Settings of any data source setup that uses this ODBC driver.

Use the **Proceed** (**PgDn**) command to create the Shadow Dictionary. After the Shadow Dictionary is created, the menu appears.

If you have previously created a Shadow Dictionary, the following message appears:

> Shadow dictionary already exists. Do you want to re-create it?

Enter **Y** to re-create the Shadow Dictionary. Enter **N** and then the **Exit** (**F7**) command to return to the menu.

Create Data Dictionary

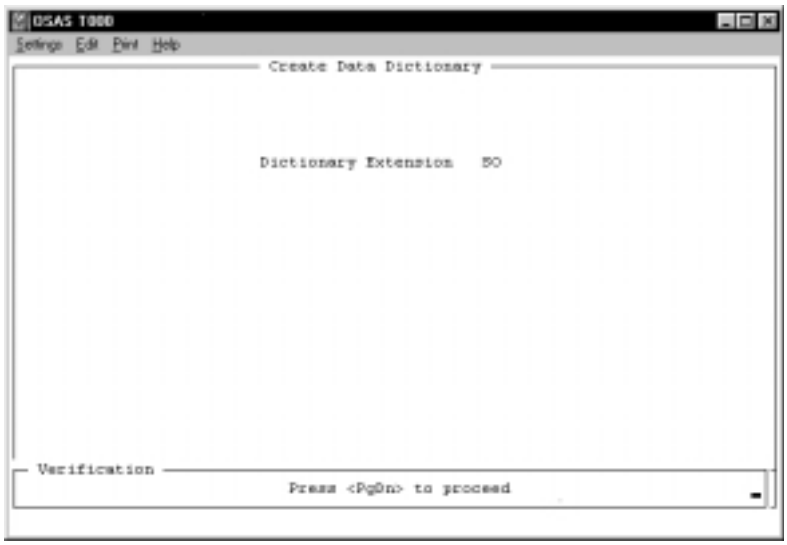
Use the Create Data Dictionary function to create a set of data dictionary files. The files can have any 3-character extension for identification purposes.

Note

In order for the data dictionary files to work with the ODBC drivers, the dictionary files must have the extension ".1". However, if you are creating installable media, you must create data dictionary files for each application. These files are merged into the *.1 files and OSTPL during installation.

Starting the function

Select **Create Data Dictionary** from the Data Dictionary menu. The function screen appears.



Field	Descriptions
Dictionary Extension	Enter the extension of the data dictionary items you want to create. These files are built from the base data dictionary definitions in the *.OSI files.

Check your entry. If you want to change it, move the cursor to the field, or use the **Abandon** (**F5**) command.

When your entry is correct, use the **Proceed** (**PgDn**) command to save the record. Then enter another extension or use the **Exit** (**F7**) command to return to the menu.

Copy File(s) to Dictionary

Use the Copy File(s) to Dictionary function to copy file, index and field definitions from one BASIS Data Dictionary to another.

Starting the function

Select **Copy File(s) to Dictionary** from the Data Dictionary menu. The function screen appears.

Field	Descriptions
From Dictionary	Enter the source dictionary extension you want to copy file information from.
To Dictionary	Enter the destination dictionary extension you want to copy file information to.

Field	Descriptions
Copy	If you want to copy all application files, enter **1**. If you want to copy specific application files, enter **2**. If you want to copy the base dictionary tables, enter **3**.
Application ID	If you entered 1, enter the ID of the application you want to copy file information from. All files, fields, and indexes defined with this application ID will be copied to the destination dictionary files.
File Name/To Name	If you selected 2, enter the ID of the filename you want to copy, then enter the destination filename.

Check your entries. If you find mistakes, move the cursor to the fields you want to change, or use the **Abandon** (**F5**) command to start again from the beginning of the screen.

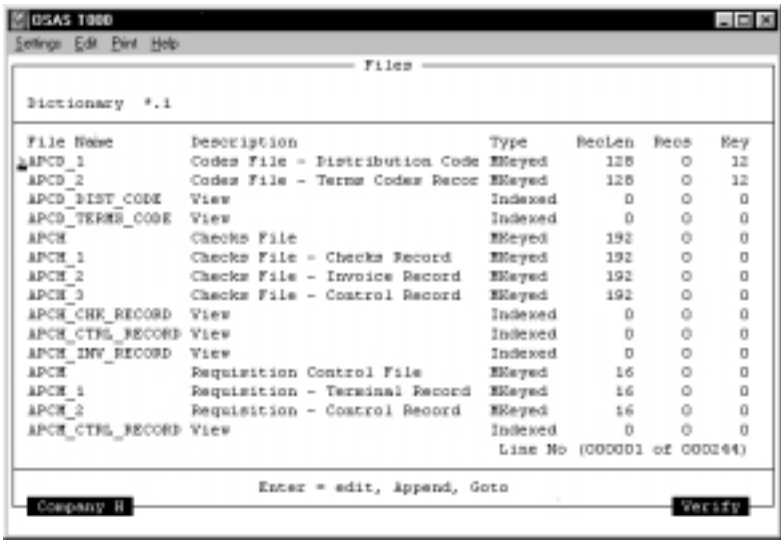
When everything is correct, use the **Proceed** (**PgDn**) command to save the record. Then copy another dictionary or use the **Exit** (**F7**) command to return to the menu.

Files

Use the Files function to set up and maintain information about the data files used in OSAS programs.

Starting the function

Select **Files** from the Data Dictionary menu. The function screen appears.

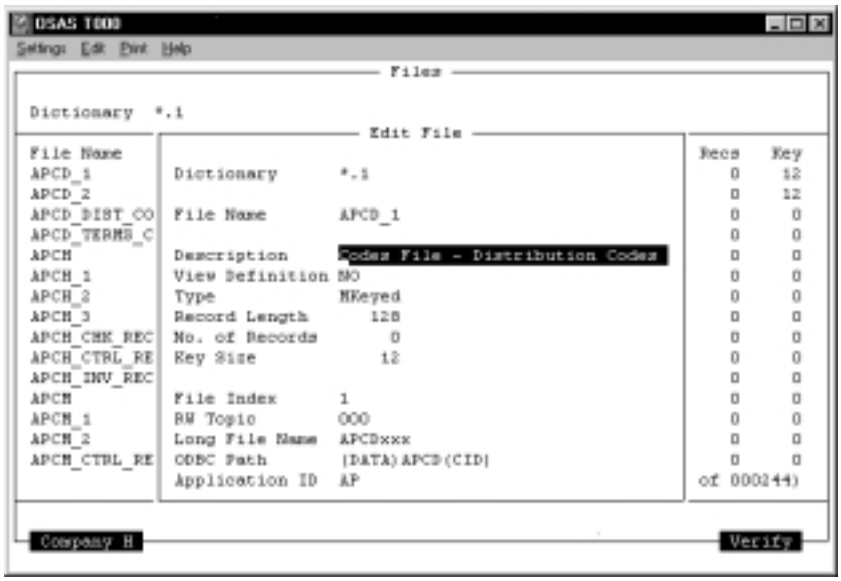

OSAS T000
Settings Edit Prev Help
Files
Dictionary *.1
File Name Description Type RecLen Recs Key
APCD_1 Codes File - Distribution Code BKeyed 128 0 12
APCD_2 Codes File - Terms Codes Recor BKeyed 128 0 12
APCD_DIST_CODE View Indexed 0 0 0
APCD_TERMS_CODE View Indexed 0 0 0
APCH Checks File BKeyed 192 0 0
APCH_1 Checks File - Checks Record BKeyed 192 0 0
APCH_2 Checks File - Invoice Record BKeyed 192 0 0
APCH_3 Checks File - Control Record BKeyed 192 0 0
APCH_CHK_RECORD View Indexed 0 0 0
APCH_CTRL_RECORD View Indexed 0 0 0
APCH_INV_RECORD View Indexed 0 0 0
APCM Requisition Control File BKeyed 16 0 0
APCM_1 Requisition - Terminal Record BKeyed 16 0 0
APCM_2 Requisition - Control Record BKeyed 16 0 0
APCM_CTRL_RECORD View Indexed 0 0 0
Line No (000001 of 000244)
Enter = edit, Append, Goto
Company H
Verify

Command bar	Definitions
Enter = edit	Move the prompt (>) to the line you want to edit and press **Enter**.
Append	Press **A** to add a file.
Goto	Press **G** to go to a specific file.

If everything is correct, use the **Exit** (**F7**) command to return to the menu.

Files Line-Item Entry screen

When you elect to edit or append a file, the Edit File screen or the Append File screen appears:



Field	Descriptions
File Name	Enter the name of the file you are working with. Do not include the company ID in the filename.
Description	Enter a description for the file.
Type	Enter one the following letters for the file type: **I** Indexed **L** Serial **P** Program **D** Directory **K** Keyed **M** MKeyed **S** String

Field	Descriptions
Record Length	Enter the size for a record in the file.
No. of Records	If the file is not dynamic, enter the maximum number of records in the file. If the file is dynamic, press **Enter** to accept the default 0.
Key Size	If the file is single-keyed, enter the key size for the file.
File Index	Enter the FILE[ALL] element the file is usually opened on.
RW Topic	If the file has an associated Report Writer topic number, enter that topic number.
Long File Name	Enter the long filename for the file. Use **xxx** to designate the file as a company-specific file.
Application ID	Enter the application ID the file belongs to.

Check your entries. If you find mistakes, move the cursor to the fields you want to change, or use the **Abandon** (**F5**) command to start again from the beginning of the screen.

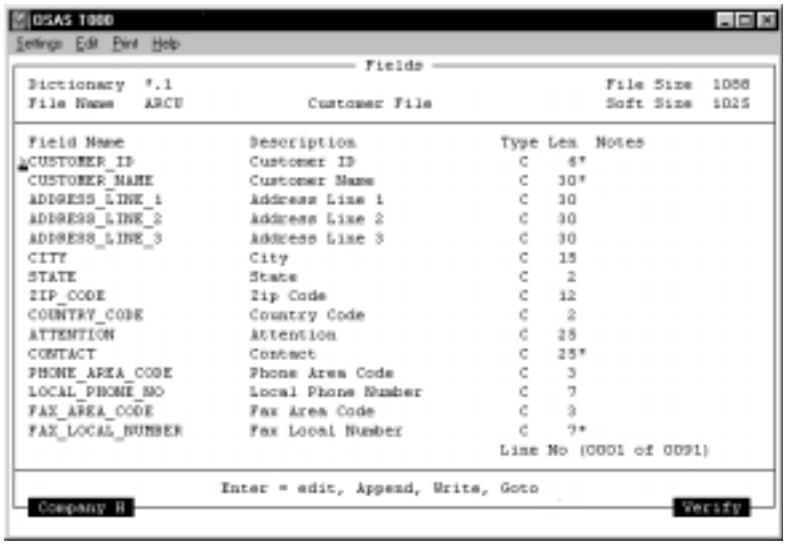
When everything is correct, use the **Proceed** (**PgDn**) command to save the record, or use the **Exit** (**F7**) command to abort the line-item entry area.

Fields

Use the Fields function to define the fields in the OSAS data files. String templates and the GENERAL Report Writer's data dictionary files are built from this data.

Starting the function

Select **Fields** from the Data Dictionary menu. The function screen appears.

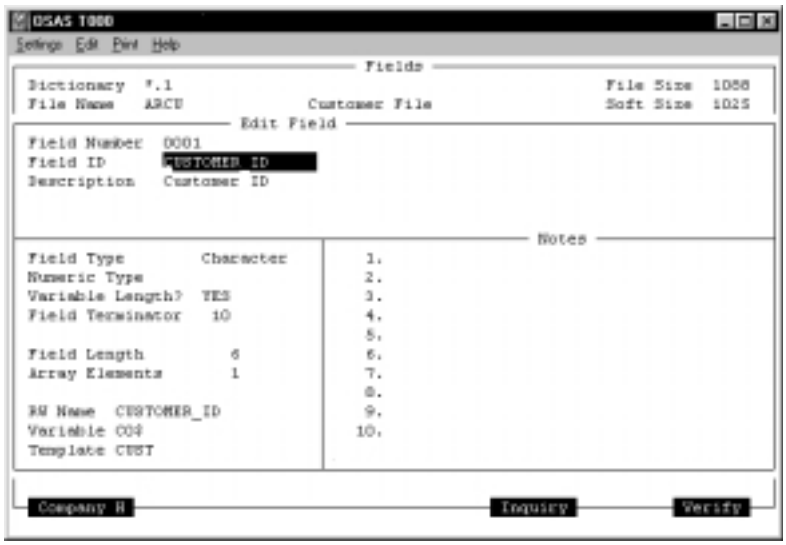

OSAS T000
Settings Edit Print Help
Fields
Dictionary *.1
File Name ARCU
Customer File
File Size 1056
Soft Size 1025
Field Name Description Type Len Notes
CUSTOMER_ID Customer ID C 6*
CUSTOMER_NAME Customer Name C 30*
ADDRESS_LINE_1 Address Line 1 C 30
ADDRESS_LINE_2 Address Line 2 C 30
ADDRESS_LINE_3 Address Line 3 C 30
CITY City C 15
STATE State C 2
ZIP_CODE Zip Code C 12
COUNTRY_CODE Country Code C 2
ATTENTION Attention C 25
CONTACT Contact C 25*
PHONE_AREA_CODE Phone Area Code C 3
LOCAL_PHONE_NO Local Phone Number C 7
FAX_AREA_CODE Fax Area Code C 3
FAX_LOCAL_NUMBER Fax Local Number C 7*
Line No (0001 of 0091)
Enter = edit, Append, Write, Goto
Company N
Verify

Command bar	Definitions
Enter = edit	Move the prompt (>) to the line you want to edit and press **Enter**.
Append	Press **A** to add a field.
Write	Press **W** to write the changes to the selected filename.

If everything is correct, use the **Exit** (**F7**) command to return to the Data Dictionary menu.

Fields Line-Item Entry screen

When you elect to edit or append a field the Edit Field screen or the Append Field screen appears:



Field	Descriptions
Field ID	Enter the ID you want to use for the field. These words are checked against a reserved word file. A warning appears if you enter a reserved word. A reserved word is a key word from a third party SQL language that cannot be used for field names.
Description	Enter a description for the field.

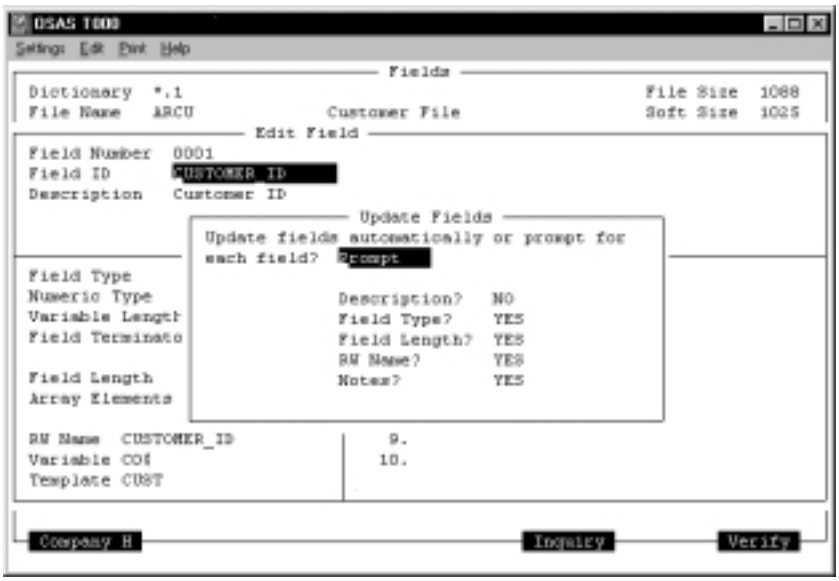
Field	Descriptions
Field Type	Enter one of the following letters for the types of fields available: **C** Character **N** Numeric **U** Unsigned Interger **I** Signed Interger **F** IEEE Float **D** BCD Float **B** Business Math **X** 'C' Float **Y** 'C' Double
Numeric Type	If the numeric is a Boolean, enter **B**. If the numeric is a date, enter **J**. If the numeric is any other type, enter **O**. If the field type is non-numeric, skip this field.
Variable Length?	If the field is of variable length and requires a field terminator, enter **Y**; if not, enter **N**.
Field Terminator	Enter the decimal code that is used to represent a field terminator in your file. All OSAS standard files use a decimal 10 as a terminator.
Field Length	Enter the length of the field in bytes.
Array Elements	If this field is an array, enter the number of array elements. All arrays are one-based, so if the array has two elements, enter **2**.
RW Name	Enter the name to be used in the GENERAL Report Writer.
Variable	Enter the variable ID used to represent this field. If this application uses string templates, leave this field blank.
Notes	Enter any descriptive notes you want to appear on the file layouts.

Check your entries. If you find mistakes, move the cursor to the fields you want to change, or use the **Abandon** (**F5**) command to start again from the beginning of the screen.

When everything is correct, use the **Proceed** (**PgDn**) command to save the record, or use the **Exit** (**F7**) command to abort the line-item entry area.

Update Fields screen

After you approve the field information, the other files are scanned for matching field names. If data changes have been made, the Update Fields screen appears to update other files with the changed data.



Field	Descriptions
Update fields automatically or prompt for each field?	Enter **P** if you want a prompt to appear before each field is updated. Enter **A** if you want all fields to be updated automatically. If you enter **P**, each field name will appear on the Update Fields screen.
Description?	If you want to update the description with changes, enter **Y**; if not, enter **N**.
Field Type?	If you want to update the field type with changes, enter **Y**; if not, enter **N**.

Field	Descriptions
Field Length?	If you want to update the field length with changes, enter **Y**; if not, enter **N**.
RW Name?	If you want to update the RW name with changes, enter **Y**; if not, enter **N**.
Notes?	If you want to update the notes with changes, enter **Y**; if not, enter **N**.

Check your entries. If you find mistakes, move the cursor to the fields you want to change. If you are prompted for each field, the next field will appear; if you are done, the prompt will return to the filename.

Indexes

Use the Indexes utility to define the keys used in OSAS Mkeyed data files.

Starting the function

Select **Indexes** from the Data Dictionary menu. The function screen appears.

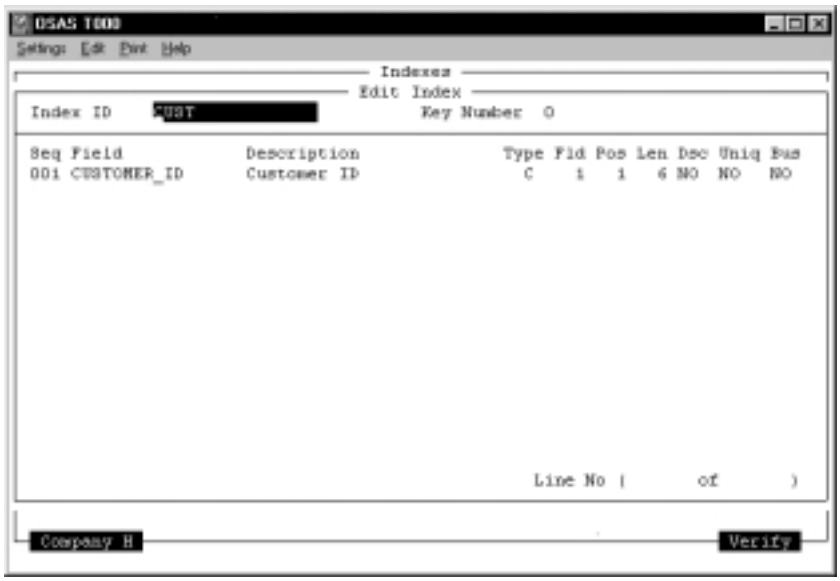
Field	Descriptions
Dictionary	The current data dictionary selection is displayed.
File Name	Enter the filename you want to work with. The file size and soft size appear.

Command bar	Definitions
Enter = edit	Move the prompt (>) to the line you want to edit and press **Enter**.
Append	Enter **A** to add an index.
Change view	Enter **C** to see the keys in the file definition syntax.
Write	Enter **W** to write the changes to the selected filename.

If everything is correct, use the **Exit** (**F7**) command to return to the menu. If you made changes, you are prompted to save the changes before you exit.

Indexes Line-Item entry screen

When you elect to edit or append an index, the Edit Index screen or the Append Index screen appears:


DSAS T000
Settings Edit Print Help
Indexes
Edit Index
Index ID CUST
Key Number 0
Seq Field Description Type Fld Pos Len Dsc Uniq Dup
001 CUSTOMER_ID Customer ID C 1 1 6 NO NO NO
Line No (of)
Company H
Verify

Field	Descriptions
Index ID	If you are adding an index, enter an ID to identify the key. If you are editing an index, the index ID of the selected key is displayed.
Seq	The sequence number is assigned for each segment of the key. When you append a segment, the sequence number is displayed.
Field	Enter the field name you want to use in the segment, or leave the field blank if the segment consists of more than one field. If you enter a field name, the description, type, field, position, and length appear.

Field	Descriptions
Description	If you entered a field name, the description appears from the Field Definitions file. If this is a multi-field segment, enter the description for the segment.
Type	If the field type is character, **C** appears; if it's numeric, **N** appears.
Fld	If you entered a field name, the field number where this field is located in the file is displayed; if not, enter the field number.
Pos	If you entered a field name, the starting position of the field is displayed; if not, enter the starting position of the field in the string you are entering.
Len	Enter the total length of the field.
Dsc	If the field is a descending sort, enter **Y**; if not, enter **N**.
Uniq	If the field is a unique field, enter **Y**; if not, enter **N**.
Bus	If the field is a business math type and to be sorted as such, enter **Y**; if not, enter **N**.

Command bar	Definitions
Enter = edit	Move the prompt (>) to the line you want to edit and press Enter.
Append	Enter **A** to add an index.
Description	Enter **D** to edit the index ID description.

If everything is correct, use the **Exit** (**F7**) command to return to the main Index screen.

File Layouts

Use the File Layouts function to print a copy of the BASIS Data Dictionary files.

Starting the function

Select **File Layouts** from the Data Dictionary menu. The function screen appears.

Field	Descriptions
Dictionary	The current data dictionary selection is displayed.
Application ID	Enter the ID of the application you want to print file layouts for. If you want to print all application file layouts, leave this field blank.
Filename From/Thru	Enter the range of filenames you want to print.

Field	Descriptions
Application Description	The description associated with the application ID you entered is displayed. Press Enter to accept it, or enter a different ID.

Command bar	Definitions
Print File Layouts Using	If you want to print file layouts using templates definitions, press **1**. If you want to print the layouts with standard variable definitions, press **2**.
Output device - (P)rinter p(R)eview (F)ile (S)creen (E)nd	Press **P** to print the file layouts, **R** to preview the layouts, **F** to file them, **S** to display them on the terminal screen, or **E** to exit to the menu.

File Layout sample

```
INVExxx     IN - IN Items

    Channel Index:2

   Template:DIM
INVE$:"ITEM:C(20*),DESC:C(35*),SCAT:C(2*),STAT:C(1*),ITYP:C(1*),BUOM:C(5*),TAXC:C(2*),PRID:C(6*),UNIT:C(5*),
PROD:C(12*),UD01:C(12*),UD02:C(12*),UD03:C(12*),UD04:C(12*),UD05:C(12*),UD06:C(12*),UD07:C(12*),UD08:C(12*),
UD09:C(12*),UD10:C(12*),UD11:C(12*),UD12:C(12*),UD13:C(12*),UD14:C(12*),UD15:C(12*),UD16:C(12*),ITMWT:N(14*),
LOTS:N(1*),KITS:N(1*),REORD:N(1*),RSV1:N(1*),RSV2:N(1*),RSV3:C(1*),ISVA:C(1*),ISVN[2]:N(1*)"

    RW Topic No.:500

KNUMSegmentsDescription

             0 [1:1:20]       Item ID
             1 [2:1:35]       Description
              +[1:1:20]       Item ID
             2 [3:1:2]        Sales Category
              +[1:1:20]       Item ID
             3 [8:1:6]        Price ID
              +[1:1:20]       Item ID
             4 [10:1:12]      Product Line
              +[1:1:20]       Item ID
             5 [5:1:1]        Item Type
              +[10:1:12]      Product Line
              +[1:1:20]       Item ID
             6 [4:1:1]        Item Status
              +[1:1:20]       Item ID
             7 [11:1:12]      User-Defined Field
             -------------
             7 segments

_____________________________________________________________________________________
Inventory, Version 6.00Page IN-3
Section 1:  INVExxx     IN - IN Items
```

```
IN Items

File Name:  INVExxx     IN            Record Size:  341 (384)
File Type:  Mkeyed - Dynamic          Number of keys:  13

Field No.TemplateDescriptionFormatNote

1         ITEM_ID    Item ID                      C20
2         DESCRIPTIONDescription                  C35
3         SALES_CATEGSales Category               C2
4         ITEM_STATUSItem Status                  C1A=Active
                                                  D=Discontinued
                                                  S=Superceded
                                                  O=Obsolete
5         ITEM_TYPE  Item Type                    C11 = No
                                                  2 = Yes
6         BASE_UOM   Base Unit of Measure         C5
7         TAX_CLASS  Tax Class                    C200-99
8         PRICE_ID   Price ID                     C6
9         DEFAULT_UOMDefault Unit of Measure      C5
10         PRODUCT_LINProduct Line                C12
11         USER_FIELD_User-Defined Field 01       C12
12         USER_FIELD_User-Defined Field 02       C12


_____________________________________________________________________
Inventory, Version 6.00Page IN-1
Table of Contents


End of Report
```

Field/File Cross-Reference List

Use the Field/File Cross-Reference List function to produce a printout by field name across files. Use the list to verify the consistency of field names in related files.

Starting the function

Select **Field/File Cross-Reference List** from the Data Dictionary menu. A selection screen appears.

Field	Descriptions
Dictionary	The current data dictionary selection is displayed.
Field ID From/Thru	Enter the range of field IDs you want to print.
Filename From/Thru	Enter the range of filenames you want to print.
Sort By?	Press **1** to sort by field name, press **2** to sort by file name.

Command bar	Definitions
Output device - (P)rinter p(R)eview (F)ile (S)creen (E)nd	Press **P** to print the file layouts, **R** to preview the layouts, **F** to file them, **S** to display them on the terminal screen, or **E** to exit to the menu.

Field/File Cross-Reference List sample

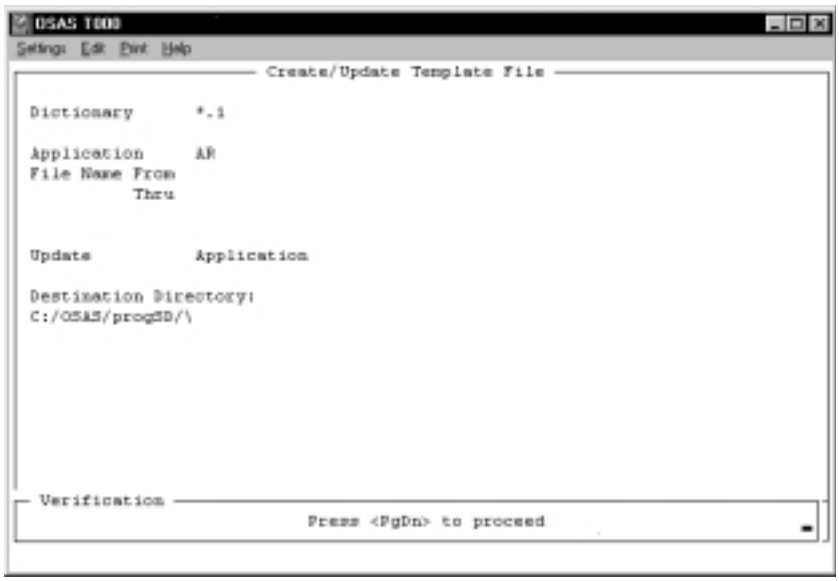
```
08/24/99                Field/File Cross-Reference List                Page 9999

    Field       File         Description                        Format Notes
  ==========================================================================
     ADJA        INLP         Adjustment Amount                    N   14 INUP
     ADJA        INPP         Adjustment Amount                    N   14 INUP
     ADJA        INPS         Adjustment Amount                    N   14 INUP
     ITEM        INAI         Item ID                              C   20
     ITEM        INBN         Item ID                              C   20
     ITEM        INCJ         Item ID                              C   20
     ITEM        INCS         Item ID                              C   20
     ITEM        INCT         Item ID                              C   20
     ITEM        INHI         Item ID                              C   20
     ITEM        INHS         Item ID                              C   20
     ITEM        INKY         Item ID                              C   20
     ITEM        INLD         Item ID                              C   20
     ITEM        INLH         Item ID                              C   20
     ITEM        INLP         Item ID                              C   20
     ITEM        INLS         Item ID                              C   20
     ITEM        INLT         Item ID                              C   20
     ITEM        INQL         Item ID                              C   20
     ITEM        INQT         Item ID                              C   20
     ITEM        INRQ         Item ID                              C   20
     *ITEM       INSH         Item ID                              C   25
     ITEM        INSN         Item ID                              C   20
     ITEM        INTL         Item ID                              C   20
     ITEM        INTR         Item ID                              C   20
     ITEM        INUM         Item ID                              C   20
     ITEM        INUP         Item ID                              C   20
     ITEM        INVE         Item ID                              C   20
     ITEM        INVI         Item ID                              C   20
     ITEM        INXT         Item ID                              C   20

                  *=Discrepency in field type or length

                              End of report
```

Create/Update Template File

Use the Create/Update Template File function to create or update the string template files OSTPL or xxTPL (xx replaces the application ID).

Starting the function

Select **Create/Update Template File** from the Data Dictionary menu. The function screen appears.



Field	Descriptions
Dictionary	The current data dictionary selection is displayed.
Application	Enter the application ID that you want to create templates with.
File Name From/Thru	Enter the range of filenames you want to create templates for, or press **Enter** at From/Thru to select all files.

Field	Descriptions
Update	If you want to update an application-specific file, enter **A**. If you want to update the OSTPL file, enter **O**.
Destination Directory	Enter the directory where the template file exists. If the template file does not exist in the specified path, this function will create the path for you.

Check your entries. If you find mistakes, move the cursor to the fields you want to change, or use the **Abandon** (**F5**) command to start again from the beginning of the screen.

When everything is correct, use the **Proceed** (**PgDn**) command to save the record. Then create/update another data dictionary or use the **Exit** (**F7**) command to return to the menu.

Create File(s) from Data Dictionary

Use the Create File(s) from Data Dictionary function to create data files for an application based on the criteria in the BASIS Data Dictionary.

If the file already exists, a prompt appears to overwrite it. After each file is created, the xxDATA.yyy file is updated with the resulting FID and FIN information.

Starting the function

Select **Create File(s) from Data Dictionary** from the Data Dictionary menu. The function screen appears.

Field	Descriptions
Dictionary	The current data dictionary selection is displayed.
Application ID	Enter the ID of the application you want to create files for.

Field	Descriptions
Version Number	Enter the version number of the data file you want to create. This number will update the xxDATA.yyy file for application xx and version yyy.
Create	If you want to create all application files, press **1**. If you want to create a specific file, press **2**.
File Name	If you elected to create a file, enter the name of the file you want to create.

Check your entries. If you find mistakes, move the cursor to the fields you want to change, or use the **Abandon** (**F5**) command to start again from the beginning of the screen.

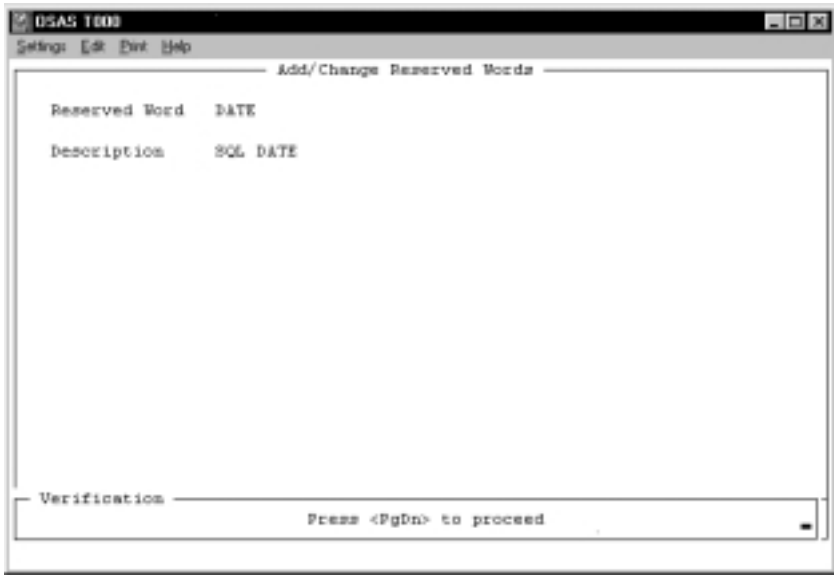
When everything is correct, use the **Proceed** (**PgDn**) command to save the record. Then create/update another data dictionary or use the **Exit** (**F7**) command to return to the menu.

Add/Change Reserved Words

Use the Add/Change Reserved Words function to add or update the file or reserved SQL words. This file is verified when you add a field name to a file.

Starting the function

Select **Add/Change Reserved Words** from the Data Dictionary menu. The function screen appears.



Field	Descriptions
Reserved Word	Enter the reserved word that will be used to validate all fields.
Description	Enter a description for the reserved word.

Check your entries. If you find mistakes, move the cursor to the fields you want to change, or use the **Abandon** (**F5**) command to start again from the beginning of the screen.

When everything is correct, use the **Proceed** (**PgDn**) command to save the record. Then create/update another data dictionary or use the **Exit** (**F7**) command to return to the menu.

Audit Field Names for Reserved Words

Use the Audit Field Names for Reserved Words function to validate an application for reserved words or check all applications.

Starting the function

Select **Audit Field Names for Reserved Words** from the Data Dictionary menu. The function screen appears.

Field	Descriptions
Dictionary	The current data dictionary selection is displayed.
Application ID	Enter the ID of the application you want to create files for, or leave this field blank to verify all files for reserved words.
File Name From/Thru	Enter the range of filenames you want to verify reserved words for, or press **Enter** at From/Thru to select all files.

Command bar	Definitions
Output device - (P)rinter p(R)eview (F)ile (S)creen (E)nd	Press **P** to print the file layouts, **R** to preview the layouts, **F** to file them, **S** to display them on the terminal screen, or **E** to exit to the menu.

Audit Field Names for Reserved Words List sample

12/19/1999 Builders Supply Page 1
12:39 PM Audit Field Names for Reserved Words

File ID	Field Name	Description of Reserved Word
INCA	DESC	SQL DESC
INCB	DESC	SQL DESC
INCC	DESC	SQL DESC
INCL	DESC	SQL DESC
INCS	DESC	SQL DESC
INFT	DESC	SQL DESC
INGL	DESC	SQL DESC
INHS	TIME	SQL TIME
INKY	DESC	SQL DESC
INLD	MIN	SQL MIN
INLO	DESC	SQL DESC
INLS	TRAN	SQL TRAN
INPL	DESC	SQL DESC
INPP	DESC	SQL DESC
INPS	DESC	SQL DESC
INRQ	DESC	SQL DESC
INTB	DESC	SQL DESC
INTL	TRAN	SQL TRAN
INTR	TRAN	SQL TRAN
INTT	TRAN	SQL TRAN
INUD	DESC	SQL DESC
INVE	DESC	SQL DESC

End of Report

Reserved Word List

The Reserved Words List contains all the words that are reserved SQL words.

Starting the function

Select **Reserved Words List** from the Data Dictionary menu. The function screen appears.

Field	Descriptions
Reserved Word From/Thru	Enter the range of reserved words you want to print, or press **Enter** at From/Thru to select all reserved words.

Command bar	definitions
Output device - (P)rinter p(R)eview (F)ile (S)creen (E)nd	Press **P** to print the file layouts, **R** to preview the layouts, **F** to file them, **S** to display them on the terminal screen, or **E** to exit to the menu.

Reserved Words List follows sample

```
12/19/1999                    Builders Supply                    Page    1
            12:41 PM                  Reserved Words List

                    Reserved Word       Description
          ------------------------------------------------------

                        ABSOLUTE            SQL ABSOLUTE
                          ACTION              SQL ACTION
                             ADD                 SQL ADD
                             ALL                 SQL ALL
                        ALLOCATE            SQL ALLOCATE
                           ALTER               SQL ALTER
                             AND                 SQL AND
                             ANY                 SQL ANY
                              BY                  SQL BY
                         CASCADE             SQL CASCADE
                       CASCADED            SQL CASCADED
                            CASE                SQL CASE
                            CAST                SQL CAST
                         CATALOG             SQL CATALOG
                       CHARACTER           SQL CHARACTER
                  CHARACTER_LENGTH    SQL CHARACTER_LENGTH
                     CHAR_LENGTH         SQL CHAR_LENGTH
                           CHECK               SQL CHECK
                      CHECKPOINT          SQL CHECKPOINT
                           CLOSE               SQL CLOSE
                      CLUSTERED           SQL CLUSTERED
                       COALESCE            SQL COALESCE
                        COLLATE             SQL COLLATE
                      COLLATION           SQL COLLATION
                         COLUMN              SQL COLUMN
                         COMMIT              SQL COMMIT
                      COMMITTED           SQL COMMITTED
                        COMPUTE             SQL COMPUTE
                        CONFIRM             SQL CONFIRM
                        CONNECT             SQL CONNECT
                     CONNECTION          SQL CONNECTION
                     CONSTRAINT          SQL CONSTRAINT
                    CONSTRAINTS         SQL CONSTRAINTS
                       CONTINUE            SQL CONTINUE
                     CONTROLROW          SQL CONTROLROW
                        CONVERT             SQL CONVERT
```